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ECONOMIC REPORT of the GOVERNOR

1982

State of Michigan

WILLIAM G. MILLIKEN

Governor

Transmitted to the Michigan Legislature

March 1982

March, 1982

Ladies and Gentlemen of the Legislature:

It is my pleasure to submit for your consideration my 1982 *Economic Report*, the fourteenth, and last, such report to be submitted by my office.

At this time last year, I had expected that the economy would begin to improve in 1981 and that 1982 would be a good year for Michigan. However, the expected recovery from back-to-back national recessions has failed to materialize due to tight monetary policies, high interest rates, investor concern about record federal deficits, and continued consumer reluctance to purchase large durable goods, particularly automobiles. There is, however, hope for better news in the latter months of 1982.

For the present, Michigan continues in the grip of the deepest and longest recession since the 1930s. Real Michigan personal income, the best measure of economic health in the state, declined in 1979, 1980, and 1981 and is expected to increase only modestly in 1982 due to a sharp decline in the rate of inflation, not an improvement in income levels. Real Michigan personal income in 1982 will still be 8.2 percent below the 1978 peak.

Our most important industry, motor vehicles, has been severely buffeted by high interest rates, inflation, declining real incomes, government regulation, and foreign competition. Domestic automobile sales were only 6.2 million units in 1981, 5.7 percent below the depressed 1980 level.

The short-run outlook is bleak, but I have every expectation that moderating inflation, falling interest rates, and the 10 percent federal tax cut beginning July 1 will get the economy moving again in the latter half of 1982.

Specifically, Michigan personal income will increase 6.4 percent in 1982, but, when adjusted for inflation, will rise 1.6 percent, due to the expected decline in inflation. Michigan employment will continue to decline in the early months of the year, but should increase modestly in the last half of 1982. The unemployment rate is projected to average 14.4 percent, which would be the highest yearly average on record since the data series began in 1956. Automobile sales are forecast to increase 7.8 percent to 9.2 million units in 1982 and Michigan motor vehicle production will rise 17.8 percent. The rate of inflation will moderate considerably for the second consecutive year, as the Detroit CPI is expected to increase 4.7 percent compared with a 15.9 percent increase in 1980 and a 9.3 percent increase in 1981.

However, even the expected recovery in the national and state economies will not solve all of Michigan's problems. There have been fundamental changes in the automobile industry that will prevent employment nationwide and in Michigan from reaching the pre-1980 recession peak for a number of years. This expectation adds a great sense of urgency to our efforts to diversify the Michigan economy.

How different the economy is today than when I delivered my first *Economic Report* in 1969. The national unemployment rate was about 3.5 percent then and we were concerned because the rate of inflation was increasing at a rate of slightly over 4 percent. In the 1969 message, I reported that Michigan had never been more prosperous. Much has changed since then. Inflation and interest rates are double the 1969 rates, the import share of the automobile market is nearly three times the 1969 share of 10 percent, gasoline prices are about four times higher than in 1969, and Michigan's share of passenger car assemblies has fallen from 35 percent in 1969 to about 30 percent today. As a consequence of these changes, there has been a large increase in unemployment. Nevertheless, on the brighter side there were also 400,000 more persons employed in 1981 than in 1969.

The last decade has been difficult for Michigan with rampant inflation, high unemployment, and declining prosperity in the automobile industry. There have been three national recessions since 1970, each more severe than the last, and Michigan has suffered more than any other state. Although, we also enjoyed many prosperous years during the last decade, the hard times are more vivid in our minds, as we face the reality of the worst national economic conditions since the Great Depression. But we are emerging from the recession and the 1980s will bring a new period of progress and prosperity to Michigan, if we take advantage of the opportunities presented to us.

I believe we made much progress toward achieving this goal with the successful bipartisan effort to enact long overdue reforms in the workers' compensation system. These reforms will save Michigan businesses about $300 million each year and make this state a much more attractive location for new firms and for the expansion of existing firms. I would like to commend the legislature for the cooperative attitude that made this major achievement possible. The end result will be more jobs for Michigan and continued protection for injured workers.

Nevertheless, the agenda for revitalizing Michigan's economy does not end with workers' compensation reform. I have also submitted a number of other economic development proposals to you that will build on our initial success and increase our chances of retaining and attracting the types of businesses that will provide the job opportunities we need to remain a vital, growing state. The most important of these proposals, briefly summarized, would:

- Establish a $100 million economic development authority and fund to provide capital for new and expanding businesses, particularly in the high-technology field.

- Permit the prudent use of pension funds for investments to stimulate employment growth.

- Establish urban enterprise zones to help revitalize our central cities.

- Establish a competitive ratemaking system for workers' compensation.

- Revise the unemployment insurance act to require workers to wait a week before collecting benefits, and increase from 18 to 20 the minimum number of weeks worked eligibility requirement.

- Remove prohibitions against foreign banking in Michigan and permit statewide branch banking.

- Provide tax relief to assist small, low-profit firms; encourage research and development activities and new capital investments; and further reduce workers' compensation and unemployment insurance costs.

All of these proposed changes are designed to make it easier and less expensive for firms to do business in Michigan. They represent an investment in our future that will be returned many times over in the years to come.

In addition to the need to enact programs to improve the longer term outlook for Michigan, we must also deal with even more immediate fiscal problems that have been caused by the weakness of our economy.

The fiscal problems we have had to deal with in recent years have been of an unprecedented magnitude. When adjusted for inflation, the fiscal year 1982 budget is about 22 percent below the fiscal 1978 budget, and nearly one percent below the fiscal 1972 budget. There has been no state in the nation, since the Great Depression, that has been required to reduce their budget as much as we have reduced ours. During this time state revenue in Michigan as a percent of income has dropped from 8.2 percent in fiscal year 1979 to an estimated 7.6 percent in fiscal year 1982. Our ranking among the states dropped from 22nd highest in 1979 to 32nd in 1980 and will likely drop even lower in 1982.

This will be my last year as governor and I plan to concentrate my efforts on coping with the fiscal and economic problems facing this state. With your cooperation, I believe we can lay the groundwork for

an economic resurgence in Michigan. I believe that the enactment of my economic development program will curb the severity of future economic cycles in this state. This will help make the economic and fiscal problems faced by future governors and legislators less serious than the severe problems we have faced in the last decade, and provide a more secure future for all our citizens. We can leave no greater legacy.

I submit this *Economic Report* to you with the hope that it will provide the information needed to develop sound economic and fiscal policies that will allow Michigan to achieve its full economic potential.

William G. Milliken

LETTER OF TRANSMITTAL

March, 1982

The Honorable William G. Milliken
Governor of Michigan
State Capitol
Lansing, Michigan

Dear Governor Milliken:

It is my pleasure to submit to you this 1982 *Economic Report*. This document highlights significant developments in the state and U.S. economies during 1981, and presents sector analyses and forecasts for 1982. Also included are a summary of relevant Public Acts of 1981, and significant economic events of 1981, as well as a number of historical data series.

Although personal income rose 8.4 percent in 1981, the overall economic performance was sluggish. Consumer prices increased 9.3 percent, real personal income dropped 0.8 percent, and interest rates reached the highest levels ever recorded. Michigan's unemployment rate averaged over 12 percent—the highest rate in the nation. Thus, the Michigan economy never truly emerged from the 1980 national recession.

As we enter 1982, the U.S. economy is again in the grip of a serious recession which began last summer; however, favorable prices, lower interest rates, the second phase of the federal tax cut, and improved consumer sentiment will stimulate a mild recovery by year end and a stronger recovery in 1983.

The analyses and forecasts presented in this *Report* are produced by the Office of Revenue and Tax Analysis of the Department of Management and Budget. This office also updates many of the data series presented in the *Report* in the bi-monthly newsletter, *Michigan Economic Review and Outlook.*

Valuable contributions to the *Report* were made by the Michigan Departments of Agriculture, Commerce, Labor, Natural Resources, and Transportation; and by the Office of the Budget and Word Processing Center, Michigan Department of Management and Budget.

Respectfully,

Gerald H. Miller

Gerald H. Miller, Director
Department of Management and Budget

CONTENTS

Summary of 1981 Economic Events 3
Summary of 1982 Economic Forecast 5
Summary of National Economic Policy 7
The Michigan Economy
Employment and Unemployment 10
Personal Income 18
Prices 25
Consumer Spending 29
Population 32
State and Regional Comparisons 37
Michigan Sector Analysis
Motor Vehicle and Equipment Industry 44
Energy 52
Finance 57
Construction 68
Agriculture 72
Mineral Supplies and Mining 76
Transportation 79
Tourism 83
International Trade 86
Appendix A: Intergovernmental Issues 91
Appendix B: Selected 1981 Public Acts of Economic Significance 95
Appendix C: Statistical Tables 101

LIST OF TABLES

Table		Page
1.	U.S. Economic Forecast Summary	5
2.	Michigan Economic Forecast Summary	6
3.	Detroit SMSA and Balance of State Employment, 1979-1981	10
4.	Selected Michigan Labor Market Unemployment Rates, 1979-1981	11
5.	Michigan Unemployed and Unemployment Beneficiaries, 1979-1981	12
6.	Michigan Manufacturing Industry Employment, 1979-1981	13
7.	Michigan Nonmanufacturing Industry Employment, 1979-1981	15
8.	Michigan Government Employment, 1979-1981	15
9.	Michigan Labor Force and Employment, 1979-1982	16
10.	U.S. and Michigan Personal and Per Capita Income, 1950-1981	19
11.	U.S. and Michigan Real Personal and Per Capita Income, 1950-1981	20
12.	Michigan Personal Income 1980, 1981 and 1982 Forecast	23
13.	Detroit Consumer Price Index, 1980, 1981, and 1982 Forecast	27
14.	Michigan Retail Sales Tax Collections, 1976-1982	29
15.	Michigan Retail Sales Tax Collections by Component, 1980-1981	30
16.	Employment and Unemployment Rates in Selected States, 1980-1981	38
17.	Personal Income in Selected States, 1979, 1980, and First Half 1980 and 1981	39
18.	Personal Income by Region, 1979, 1980, and First Half 1980 and 1981	40
19.	Per Capita Personal Income in Selected States, 1979 and 1980	40
20.	Per Capita Personal Income by Region, 1979 and 1980	41
21.	U.S. Motor Vehicle Production and Sales, 1979-1982	45
22.	U.S. Motor Vehicle Sales Mix, 1979-1982	46
23.	Michigan Motor Vehicle Production, 1979-1982	47
24.	Michigan Motor Vehicle Production Mix, 1979-1982	48
25.	Michigan Passenger Car Plants, Model Year 1982	49
26.	Michigan Truck Plants, Model Year 1982	50
27.	Energy Sales and Customers in Michigan, 1980 and 1981	54
28.	Regulated Public Utility Revenues, 1980 and 1981	55
29.	U.S. Money Stock, 1980 and 1981	59

30. Comparison of 1981 Money Stock Growth Targets with Actual Money Stock Growth 60
31. Market Interest Rates, 1980 and 1981 61
32. Business Loans at Commercial Banks, 1980 and 1981 . . 62
33. U.S. Financial Deposits, 1980 and 1981 64
34. Michigan Institutional Savings Market, 1975-1981 65
35. U.S. New Construction Expenditures, 1979-1981 68
36. Michigan Residential Building Permits, 1973-1981 70
37. Michigan Construction Contract Awards, 1961-1981 . . . 71
38. Michigan Cash Receipts from Farm Marketing, 1980 and 1981 73
39. Prices Received by Michigan Farmers, 1981 74
40. Michigan Mineral Production, 1980 and 1981 77
41. Michigan Tourism Indicators, 1978-1981 84
42. U.S. International Trade Balance, 1980 and 1981 86
43. Trade Under the U.S. Automotive Agreement with Canada, 1980 and 1981 87
44. Michigan Agricultural Exports, 1978-1980 88

Charts

1. Detroit Consumer Price Index, 1972-1981 26
2. Michigan Population Migration, 1970-1980 34
3. Real Moody's AAA Corporate Bond Rates, 1975-1981 . . 63
4. Michigan Residential Building Permits and Mortgage Rates, 1973-1981 69

Appendix A

A-1. State Financial Assistance to Local Units of Government 93

1982
ECONOMIC REPORT

SUMMARY OF 1981 ECONOMIC EVENTS

FIRST QUARTER

Oil Price Decontrol. President Reagan signed an executive order abolishing price controls on most domestic crude oil and its by-products. The controls were scheduled to expire on September 30, 1981.

Economic Growth. The nation's real gross national product grew 8.6 percent in the first quarter of 1981. The real growth rate was the largest quarterly expansion since the 9 percent real growth rate in the second quarter of 1978.

SECOND QUARTER

Lynch Road Plant Closed. Chrysler Corporation permanently closed its 53-year-old Lynch Road assembly plant on Detroit's east side. The shutdown eliminated about 2,200 blue-collar and white-collar jobs.

Grain Embargo Lifted. President Reagan lifted the 15-month-old embargo on grain sales to the Soviet Union. The curb on grain sales had been imposed by President Carter on January 4, 1980 in response to the Soviet invasion of Afghanistan.

Record Savings Outflow. Withdrawals from savings accounts at the country's savings and loan associations exceeded deposits by a record of $2.26 billion in March. The previous record savings outflow, $1.5 billion, occurred in April, 1979 and in July, 1966.

Auto Imports Curbed. The Japanese government announced that it would voluntarily limit automobile exports to the U.S. for two years, an event triggered by Detroit's declining auto sales; however, the agreement proved to be of little help to the U.S. auto industry.

Recession Began. The nation's real gross national product declined 1.6 percent, plunging the nation into another recession, and coming on the heels of the January to July, 1980 recession.

THIRD QUARTER

Air Traffic Controllers Strike. A strike by air traffic controllers began on August 3 in violation of federal law. Two days later, President Reagan fired the almost 12,000 striking controllers. The strike and subsequent firings disrupted air travel nationwide.

U.S. Dollar Strengthened. The U.S. dollar climbed to an 11-year high against a trade-weighted basket of 15 currencies, setting postwar records against the French franc and the Italian lira, and soaring to a 50-year high against the Canadian dollar. The dollar's value was buoyed by continued high U.S. short-term interest rates.

Tax and Spending Cuts. President Reagan signed into law two of the most far-reaching economic measures since the New Deal. The Omnibus Reconciliation Act of 1981 authorized the sharpest cutbacks in domestic spending in five decades and the Economic Recovery Tax Act of 1981 provided the largest tax cut in this century to individuals and businesses.

FOURTH QUARTER

Mortgage Rates. Mortgage rates rose to a record 18.2 percent average in October because of a weak bond market and a cash-strapped savings and loan industry.

Oil Prices. The Organization of Petroleum Exporting Countries (OPEC) agreed to a unified oil price benchmark of $34 per barrel and agreed to maintain this price through 1982.

Recession Deepened. The nation's real gross national product contracted by 5.4 percent in the fourth quarter. The decline was the steepest since the 9.9 percent drop in the second quarter of 1980, at the depths of the previous recession.

Auto Sales Slump. The domestic auto industry posted its lowest calendar-year sales total since 1961. New-car sales fell for the third consecutive year despite increasing numbers of front-wheel drive, fuel-efficient cars; wave after wave of rebates, credit assistance programs, incentives to buy; and export restrictions by Japanese automakers.

Depression Gripped Michigan. Michigan's unemployment rate rose to the highest level since the Great Depression in December. The unemployment rate reached 15.4 percent and the number of jobless rose to 655,000, on a seasonally adjusted basis.

Steel Trigger Prices. Steelmakers decried effectiveness of trigger prices and pressed for legal action against friendly nations for dumping steel in U.S. markets.

SUMMARY OF 1982 ECONOMIC FORECAST

In 1982, economic conditions are expected to remain weak during the first half of the year, due to the recession which began in the last half of 1981, but renewed economic growth is expected to develop in the latter half of the year. This recovery will be spurred by lower inflation, rising real incomes, and a 10 percent federal income tax reduction.

These developments are expected to increase real GNP by 0.1 percent and boost automobile sales 7.8 percent; however, the U.S. unemployment rate is forecast to rise to 9 percent from 7.6 percent in 1981. A summary of the forecasts for key U.S. economic variables is presented in Table 1.

TABLE 1
U.S. Economic Forecast Summary

	1981	1982 Forecast	Percent Change
Real GNP (Billions of 1972 Dollars)	$ 1,509.6	$ 1,511.2	0.1
Total Auto Sales (Millions)	8.5	9.2	7.8
Import Share (Percent)	27.3	26.0	---
Motor Vehicle Production (Millions)	7.9	9.0	13.3
Housing Starts (Millions)	1.1	1.2	9.1
Unemployment Rate (Percent)	7.6	9.0	---

In Michigan, motor vehicle production is expected to increase 17.8 percent and a moderation in the inflation rate to 4.7 percent will help increase real personal income by 1.6 percent. An improvement in employment is not expected to occur during the initial stages of the

recovery, therefore the unemployment rate is forecast to increase to 14.4 percent from 12.3 percent in 1981. A summary of the forecasts for key Michigan economic variables is presented in Table 2.

TABLE 2
Michigan Economic Forecast Summary

	1981	1982 Forecast	Percent Change
Real Personal Income (Billions of 1967 Dollars)	$ 36.1	$ 36.7	1.6
Motor Vehicle Production (Millions)	2.5	3.0	17.8
Total Employment (Thousands)	3,837	3,798	-1.0
Unemployment Rate (Percent)	12.3	14.4	---
Detroit CPI (1967=100)	277.1	290.1	4.7

SUMMARY OF NATIONAL ECONOMIC POLICY

1981 Developments

The two-year-old policy shift of the Federal Reserve Board (Fed) which mandated direct control of the nation's money stock with less concern about the level of interest rates continued to produce wide swings in monetary growth and interest rates. While the need for greater control of the money supply is clearly warranted, the Fed's policy shift created formidable operational problems, partly due to innovations in the financial markets.

Major reductions in federal taxes will span the first half of the eighties. The greatest thrust of these new policies will take effect in 1982 and 1983. In addition to sizable federal tax cuts, President Reagan proposed a new federal budget direction for the eighties which promised to reduce growth in all areas of federal spending except defense.

Although the combination of continued moderate monetary expansion and significant federal tax cuts portend a possible policy collision in late 1982 or 1983, monetary policy alone played the dominant policy role in 1981. The year began amidst record-high interest rates as the Fed sought to reduce the rampant growth in the money supply that helped fuel a partial economic recovery from the 1980 recession. Although real gross national product (GNP) grew over 8 percent in the first quarter of 1981, much of the growth occurred as a carry over from holiday spending and, by the end of the quarter, the economy began to decline. As the economy lost momentum, loan demand decreased, which lowered interest rates. From January to April, the money supply, as measured by M1-B (hereafter referred to as M1) grew 14.1 percent.

During the second quarter of the year, the economic decline resulted in a 1.6 percent drop in real GNP. From April to June, M1 declined over 6 percent, partly due to the erosion of economic activity, but also due to a sharp tightening by the Fed. This tightening dried up available funds, renewed pressure on the credit markets, and drove interest rates upward. Just as record-high interest rates at the beginning of the year derailed the economic recovery from the 1980 recession, the renewed high interest rates of last summer induced a 1981 recession. Although the economy did post a 1.4 percent rate of growth in real GNP during the third quarter because of unwanted inventory production, it plunged 5.4 percent in the fourth quarter. During the latter half of the year, M1 grew at about 4.5 percent; however, by year's end, the growth rate accelerated. This led to an upturn in interest rates as lenders feared another violent swing in the credit markets.

1982 Outlook

The Fed has repeatedly affirmed its resolve to maintain moderate growth of the nation's money supply in an effort to reduce inflationary pressures stemming from excessive monetary growth. But given the operating difficulties which have confronted the Fed over the past two years as a result of the new policy, it appears 1982 will continue to witness wide swings in both monetary growth and interest rates. The official target for M1 growth is a range of 2.5 percent to 5.5 percent.

The 10 percent individual income tax cut which takes effect in July, will provide substantial stimulation to the economy. The federal tax cuts will produce deficits of $100 billion, or more, over the next two years, in spite of the new policy to reduce the growth rate of expenditures. The economic recovery which is expected to stimulate private credit demands for individuals and businesses along with the government's need to borrow to finance the deficit has the potential to squeeze credit markets and force interest rates higher, possibly exceeding previous records. A key factor will be the performance of the Fed. The upper end of the Fed's target for money supply growth appears to be sufficient to provide for the moderate economic growth expected in the latter half of 1982 without producing a credit crunch.

There are other aspects of the new federal fiscal policies which have the potential to mitigate a major collision in the credit markets in 1982 and possibly 1983. While business tax cuts, which center around accelerated cost recovery of investment, go into effect in 1982, businesses may not use these benefits until 1983. With factory utilization well below capacity, business profits reduced by the recession, and with an upturn in consumer spending not expected until later in the year, large business credit demands for new investments in plant and equipment will probably not materialize until 1983. The individual tax cuts also contain provisions to stimulate savings and investment. These provisions include liberal individual retirement account and pension program tax exemptions and a reduction in the maximum marginal rate from 70 percent to 50 percent, among others. These provisions have the potential to reduce consumer spending and stimulate additional savings.

In previous recessions, when large deficits resulted from the erosion of tax revenues and the increase in spending for government aid programs, the deficits swelled in a similar fashion. The absence of private credit demand in the credit markets along with growth in the money supply prevented major collisions of fiscal and monetary policies. Nevertheless, while a credit crunch will probably not occur in 1982, the moderate growth stance of the Fed will bring about interest rate pressures usually not experienced at that stage of an economic recovery. In 1983, when private credit demand is revived along with another round of tax cuts and an even larger deficit, there will be a distinct possibility for a policy collision.

THE MICHIGAN ECONOMY

- Employment and Unemployment
- Personal Income
- Prices
- Consumer Spending
- Population
- State and Regional Comparisons

EMPLOYMENT AND UNEMPLOYMENT

1981 Developments

The Michigan labor market mirrored the general pattern of national and state economic activity in 1981, exhibiting a trend of steady improvement throughout most of the year, followed by a steep slide at year's end. The deterioration of economic activity brought about by high interest rates marked the start of the second recession in as many years. Falling motor vehicle sales and production translated directly into sharp declines in Michigan employment and led to a spectacular rise in the unemployment rate during December. Although an economic recovery is expected by mid-year in 1982 as a result of the federal tax cuts, only modest improvement is expected for the Michigan labor market.

Average annual state employment in 1981 was higher than the recession-depressed average calculated in 1980. As Table 3 illustrates, statewide employment averaged 80,000 persons more in 1981, a 2.1 percent gain. Employment in the auto-dependent Detroit SMSA

TABLE 3
Detroit SMSA and Balance of State Employment, 1979-1981
(Thousands)

	Labor Force	Employment	Unemployment	Unemployment rate
1979				
Detroit SMSA	2,052.0	1,891.2	160.8	7.8
All Others	2,261.0	2,086.8	174.2	7.7
Michigan	4,313.0	3,978.0	335.0	7.8
1980				
Detroit SMSA	2,030.5	1,763.7	266.8	13.1
All Others	2,267.5	1,993.3	274.2	12.1
Michigan	4,298.0	3,757.0	541.0	12.6
1981				
Detroit SMSA	2,050.8	1,792.3	258.5	12.6
All Others	2,322.2	2,044.7	277.5	11.9
Michigan	4,373.0	3,837.0	536.0	12.3

Source: Michigan Employment Security Commission.

improved only 1.6 percent, compared with a 2.6 percent gain in out-state areas. While average employment in 1981 exceeded 1980 averages, it remained below levels reached in 1979. Total employment in 1981 fell short of the 1979 total by 141,000 persons. Detroit SMSA employment was 5.2 percent below the 1979 average, while out-state employment was 2 percent below the 1979 average.

The improving economy and job prospects for most of 1981 induced people to enter or in some cases re-enter the labor force and seek employment. As a result, the statewide labor force grew 1.7 percent in 1981. The 1981 gain compared with a 0.3 percent decline in the labor force in 1980 when people were discouraged from job hunting by the recession.

The combination of a growing labor force and only marginal improvements in job opportunities prevented much improvement in the average annual state unemployment rate. In 1981, statewide unemployment averaged 12.3 percent, down only three tenths of a percentage point from the 1980 average. The total number of unemployed persons was nearly unchanged from last year. The Detroit SMSA registered slightly above average state unemployment, while out-state areas were slightly below average.

Masked by the annual averages was the significant decline in employment and sharp rise in unemployment that occurred in the final months of 1981. By August, 1981, total statewide employment had increased 237,000 persons from the low point reached in July, 1980. However, from August, 1981 to December, 1981, employment losses plunged by 260,000 persons. This left employment 23,000 persons lower at the end of 1981, than during the trough of the 1980 recession. The declines in employment brought about a jump in the statewide unemployment rate to a seasonally adjusted 15.4 percent in December, 1981. The December rate exceeded the peak unemployment rate recorded in October, 1980 by nearly a full percentage point.

TABLE 4
Selected Michigan Labor Market Unemployment Rates, 1979-1981
(Percent)

	1979	1980	1981
Ann Arbor	5.8	8.2	8.0
Battle Creek	6.9	11.6	10.1
Flint	8.8	17.7	14.7
Grand Rapids	5.4	8.4	9.0
Kalamazoo	5.2	7.9	8.5
Lansing-E. Lansing	6.7	10.5	11.3
Upper Peninsula	10.5	12.6	13.6

Source: Michigan Employment Security Commission.

More evidence that the state's employment picture was bleaker than that portrayed by the annual averages is found in the trends of unemployment rates in specific labor market areas within the state. Table 4 presents a survey of unemployment rates for selected areas which clearly illustrates the severity of the 1980 recession and the continued economic weakness in 1981. The unemployment rates for Grand Rapids, Kalamazoo, Lansing-East Lansing, and the upper peninsula continued to increase in 1981. Although the unemployment rates declined in Battle Creek and Flint, they were still very high at 10.1 percent and 14.7 percent, respectively. Ann Arbor had the lowest rate of the areas in the table with an 8 percent average. All of the areas cited in the table had 1981 unemployment rates significantly higher than those recorded in 1979.

The duration of the economic weakness in Michigan has kept the number of jobless persons in the state above the half-million mark for two consecutive years. Since state unemployment benefits cover a maximum of 26 weeks and federal extended benefits cover an additional 13 weeks, a growing number of Michigan's unemployed persons have exhausted their benefits from these programs. Table 5 illustrates that in the first half of 1980, 58.6 percent of the unemployed were claiming benefits. By the last half of 1981, only 34 percent were claiming benefits. Once unemployment compensation benefits are exhausted and when job opportunities are still lacking, individuals turn to other governmental aid programs.

TABLE 5
Michigan Unemployed and Unemployment Beneficiaries, 1979-1981
(Thousands)

Period	Average Number Unemployed	Average Claiming U.I. Benefits		Beneficiaries of Federal Program Average Claiming U.I. Benefits	
		Number	Percent	Number	Percent
1979					
Jan.-June	337.3	147.1	43.6	0.0	0.0
July-Dec.	386.8	177.0	45.8	21.1	5.5
1980					
Jan.-June	531.3	311.5	58.6	65.9	12.4
July-Dec.	550.5	254.8	46.3	70.5	12.8
1981					
Jan.-June	546.7	205.6	37.6	66.2	12.1
July-Dec.	525.2	178.7	34.0	32.4	6.2

Source: Michigan Employment Security Commission.

Wage and Salary Employment

In 1981, wage and salary employment totaled 3,451,800 which was only 2,300 below the 1980 average. In contrast, the 1981 level of wage and salary employment was over 5 percent below the average for 1979. While manufacturing employment declined by a much greater extent in the 1979 to 1981 period, both manufacturing and nonmanufacturing were nearly unchanged in 1981 from a year earlier. In 1981, government employment posted a 1.5 percent decline. The sections and tables that follow present a detailed examination of employment in these major sectors.

Manufacturing Employment

Total manufacturing employment was 1,008,100 in 1981, with 807,100 in durable goods manufacturing and 201,000 in nondurable goods manufacturing. When compared with 1980, durable goods employment was up 0.4 percent while nondurable goods employment was down 1.2 percent. Although manufacturing employment did not lose ground in 1981, it was still over 13 percent below the 1979 level.

An examination of the data presented in Table 6 reveals an interesting contrast regarding the annual pattern of activity in 1980 and 1981. Manufacturing employment in December, 1980 in both durable and nondurable categories was higher than the annual average for 1980. This illustrates economic activity was recovering from the depths of the recession reached in the first half of the year. In contrast, December employment levels in 1981 were below the 1981 annual averages reflecting the onslaught of another recession at the end of 1981. More importantly, the levels of manufacturing employment in December, 1981 were sharply lower than those found in December, 1980.

Of particular importance is the motor vehicle sector, a driving force for other manufacturing sectors. In 1980, employment in the motor vehicle sector declined 15 percent to 333,500 from the previous year; however, by year end, employment in this sector had climbed to 365,600. In 1981, the annual average rose to 344,800, but by December motor vehicle employment fell to only 322,600.

Nonmanufacturing Employment

In 1981, nonmanufacturing employment totaled 1,825,300, or 6,200 higher than in the previous year, but 30,600 below 1979's level. The general pattern of employment in the nonmanufacturing sector was similar to that described above for the manufacturing sector; however, there were exceptions to the general trends, as noted in Table 7.

Construction employment did not exhibit signs of recovering at the end of 1980 and continued to fall throughout 1981. In 1980, construction activity suffered from historically high interest rates for mortgages and a weak economy. Since then, high interest rates have

continued to keep building projects in check and employment has continued to erode. In December, 1981, construction employment was more than 30 percent below the 1979 average.

Service industry employment continued to grow steadily from 1979 to 1981. Service industry employment grew 2.9 percent in 1980 and 3.4 percent in 1981.

Government Employment

Total government employment declined 1.5 percent to 618,400 in 1981 as shown in Table 8. All levels of government participated in the decrease. The new drive at the federal level to reduce federal employment was partly responsible for the 6 percent decline in employment in 1981 to 54,900 federal workers in Michigan. Shrinking state and local budgets caused declines of 2.7 percent at the state level and 0.4 percent at the local government level. In 1981, state and local government employment totaled 147,000 and 416,600, respectively.

1982 Outlook

During the latter half of 1982, economic activity in the nation and state is expected to rebound, aided by the federal tax cut in July, 1982. The tax cut will stimulate consumer spending, including motor vehicle purchases. Motor vehicle sales should also benefit from stable gasoline prices, availability of new, fuel-efficient domestic products, and the need to replace aging stock. Additional domestic nameplate sales are expected to increase Michigan motor vehicle production, thereby stimulating state economic activity.

While the employment picture in Michigan is expected to brighten in the latter half of the year as a result of the economic recovery, the outlook for the year as a whole is lackluster. This is partly due to the relationship between economic activity and employment growth. Employment growth lags behind improvement in economic activity because firms accommodate the increased production demands during a recovery by obtaining greater productivity from their existing work force. In addition, labor force growth during the early stages of a recovery, coupled with the lack of employment opportunities, continues to push up the unemployment rate.

The 1982 outlook for Michigan's labor market illustrates these relationships. Although economic activity is expected to improve in 1982, the unemployment rate is expected to increase to 14.4 percent as shown in Table 9. The number of unemployed persons is expected to average 638,000 as employment is expected to decline 39,000.

Wage and salary employment is expected to decline 1.7 percent. Manufacturing employment is expected to fall 5 percent because of a depressed first half. Nonmanufacturing employment is expected to decline 0.3 percent and government employment is expected to be nearly unchanged.

PERSONAL INCOME

1981 Developments

The sluggish economic climate, prevailing in the U.S. for the last three years, has devastated Michigan's economy. Personal income, which is the total income received by individuals, rose to $100.1 billion in 1981 from $92.3 billion in 1980, an increase of 8.4 percent; however, this increase stemmed not from increased economic activity, but from inflation. In real terms, adjusting for inflation, personal income in Michigan actually declined 0.8 percent during 1981. Combining this loss with the 1.2 percent real decline in 1979 and the 7.8 percent fall in 1980 means, that in the past three years, the real purchasing power of Michigan citizens declined 9.6 percent. This is the longest and largest sustained fall in real Michigan personal income since the Great Depression. Tables 10 and 11 trace Michigan's personal income for the past 30 years, in both nominal and real dollars.

On a per capita basis, personal income rose 8.5 percent to $10,792 in 1981, but fell 0.7 percent, when adjusted for inflation. In the past three years, real per capita income has fallen 10.3 percent.

Wages and salaries, the major component of personal income, rose 6.6 percent to $60.9 billion in 1981, compared with $57.1 billion paid by employers in 1980 when wages and salaries gained 0.4 percent. Wage increases caused most of the growth of wages and salaries in 1981 as the number of workers receiving wages and salaries remained practically unchanged from 1980. In fact, each of the three major sectors of the economy — manufacturing industries, nonmanufacturing industries, and government — experienced increases in wage and salary payments largely due to wage increases prompted by inflation.

Manufacturing industries paid $24.7 billion in wages and salaries in 1981, an increase of 8.3 percent from the $22.8 billion paid in 1980. On a real basis, this was a decline of 0.9 percent. The durable goods industries, which accounted for 83 percent of total manufacturing wages and salaries in 1981, were hard hit by the weak economy in 1980 and remained at a depressed level in 1981. The durable goods industries, and particularly the auto industry, are vulnerable to poor economic conditions because, as real income falls, people are forced to reduce spending. Consumers, typically, forego or postpone buying relatively high-priced durable goods. Consequently, during 1980 and 1981, real wages and salaries paid by the durable goods industries dropped 18.4 percent and 0.8 percent, respectively. Activity in the nondurable manufacturing industries tends not to be as volatile as the durable sector, but due to the prolonged recession, the nondurable goods industries generated only $4.1 billion in wages and salaries in

TABLE 6
Michigan Manufacturing Industry Employment, 1979-1981
(Thousands)

	1979	1980	December 1980	1981	December 1981	Percent Change 1980-81
Total Manufacturing	1,160.1	1,007.2	1,043.0	1,008.1	941.4	0.1
Durable Goods	935.1	803.8	838.0	807.1	749.5	0.4
Lumber, Wood	14.1	11.8	11.8	11.1	9.6	-5.9
Furniture, Fixtures	23.0	21.5	21.1	21.3	21.0	-0.9
Primary Metals	88.0	69.1	68.9	66.1	57.5	-4.3
Fabricated Metals	150.8	121.2	126.1	121.3	109.7	0.1
Nonelectric Machinery	167.2	157.3	155.1	153.7	147.5	-2.3
Electric Machinery	41.9	37.5	38.7	38.2	33.4	1.9
Motor Vehicles	392.7	333.5	365.6	344.8	322.6	3.4
Other Transportation	12.9	10.6	10.1	11.0	11.1	3.7
Other Durables	44.5	41.3	40.6	39.6	37.2	-4.1
Nondurable Goods	225.0	203.4	205.0	201.0	191.9	-1.2
Food, Kindred	52.1	49.5	48.8	48.4	47.8	-2.2
Textiles, Apparel	25.8	18.4	19.3	18.7	16.0	1.6
Paper	23.8	20.9	20.3	20.2	19.9	-3.3
Printing, Publishing	34.1	33.3	34.0	33.5	33.0	0.6
Chemicals, Petroleum	47.8	46.8	45.6	45.2	43.9	-3.4
Other Nondurables	41.4	34.5	37.0	35.1	31.4	1.7

Source: Michigan Employment Security Commission.

TABLE 7
Michigan Nonmanufacturing Industry Employment, 1979-1981
(Thousands)

	1979	1980	December 1980	1981	December 1981	Percent Change 1980-81
Total Nonmanufacturing	1,855.9	1,819.1	1,846.9	1,825.3	1,819.8	0.3
Construction	139.5	117.1	112.0	109.2	96.8	-6.7
Mining	13.2	12.5	12.6	12.4	11.4	-0.8
Trans., Comm.,& Utilities	160.6	150.5	149.3	147.4	143.3	-2.1
Wholesale Trade	170.4	161.0	160.0	156.2	155.8	-3.0
Retail Trade	590.9	576.8	605.2	577.2	586.9	0.1
Finance, Ins. & Real Estate	154.5	156.1	156.6	155.7	153.0	-0.3
Services	626.8	645.1	651.2	667.3	672.6	3.4

Source: Michigan Employment Security Commission.

TABLE 8
Michigan Government Employment, 1979-1981
(Thousands)

	1979	1980	Dec. 1980	1981	Dec. 1981	Percent Change 1980-81
Total Government	621.0	627.8	624.3	618.4	623.8	-1.5
Federal	56.7	58.4	56.1	54.9	54.6	-6.0
State	147.7	151.1	150.5	147.0	148.4	-2.7
Local	416.6	418.3	417.7	416.6	420.8	-0.4

Source: Michigan Employment Security Commission.

TABLE 9
Michigan Labor Force and Employment, 1979-1982
(Thousands)

	1979	1980	1981	1982[1]	Percent Change 1980-81	Percent Change 1981-82
Total Labor Force	4,313.0	4,298.0	4,373.0	4,436.0	1.7	1.4
Employment	3,978.0	3,757.0	3,837.0	3,798.0	2.1	-1.0
Unemployment	335.0	541.0	536.0	638.0	-0.9	19.0
Unemployment Rate	7.8	12.6	12.3	14.4	-2.4	17.1
Wage and Salary Employment	3,637.0	3,454.1	3,451.8	3,393.9	-0.1	-1.7
Manufacturing	1,160.1	1,007.2	1,008.1	957.7	0.1	-5.0
Durable Goods	935.1	803.8	807.1	763.7	0.4	-5.4
Nondurable Goods	225.0	203.4	201.0	194.0	-1.2	-3.5
Nonmanufacturing	1,855.9	1,819.1	1,825.3	1,819.2	0.3	-0.3
Construction	139.5	117.1	109.2	101.8	-6.7	-6.8
Trans., Comm., & Utilities	160.6	150.5	147.4	140.0	-2.1	-5.0
Wholesale Trade	170.4	161.0	156.2	154.2	-3.0	-1.3
Retail Trade	590.9	576.8	577.2	563.5	0.1	-2.4
Finance, Ins. & Real Estate	154.5	156.1	155.7	157.1	-0.3	0.9
Services	626.8	645.1	667.3	690.0	3.4	3.4
Mining	13.2	12.5	12.4	12.6	-0.8	1.6
Government	621.0	627.8	618.4	617.0	-1.5	-0.2

[1]Estimate.

Source: Michigan Employment Security Commission.

TABLE 10
U.S. and Michigan Personal and Per Capita Income, 1950-1981

Year	Michigan Personal Income (millions)	Percent Change	U.S. Personal Income (millions)	Percent Change	Michigan Per Capita Income	Percent Change	U.S. Per Capita Income	Percent Change	Michigan Per Capita Income As Percent of U.S. Per Capita Income
1950	$10,895	13.2	$ 226,214	9.9	$1,701	N.A.	$1,496	N.A.	113.7
1951	12,176	11.8	253,232	11.9	1,874	10.2	1,645	10.9	113.9
1952	13,050	7.2	269,769	6.5	1,962	4.7	1,733	5.3	113.2
1953	14,741	13.0	285,456	5.8	2,161	10.1	1,796	3.6	120.3
1954	14,354	-2.4	287,607	0.7	2,031	-6.0	1,785	-0.6	113.8
1955	15,900	10.8	308,266	7.1	2,183	7.5	1,867	4.6	116.9
1956	16,529	4.0	330,479	7.2	2,214	1.4	1,975	5.8	112.1
1957	16,870	2.1	348,460	5.4	2,229	0.7	2,045	3.5	109.0
1958	16,520	-2.0	356,939	2.4	2,155	-3.3	2,049	0.2	105.2
1959	17,520	6.1	380,014	6.5	2,256	4.7	2,145	4.7	105.2
1960	18,225	4.0	396,086	4.2	2,326	3.1	2,201	2.6	105.7
1961	18,169	-0.3	411,301	3.8	2,302	1.0	2,248	2.1	102.4
1962	19,450	7.1	436,894	6.2	2,452	6.5	2,353	4.7	104.2
1963	20,770	6.8	459,075	5.1	2,578	5.1	2,436	3.5	105.8
1964	22,767	9.6	491,341	7.0	2,781	7.9	2,572	5.6	108.1
1965	25,386	11.5	532,022	8.3	3,038	9.2	2,750	6.9	110.5
1966	27,723	9.2	579,158	8.9	3,257	7.2	2,963	7.7	109.9
1967	29,046	4.8	620,020	7.1	3,366	3.3	3,142	6.0	107.1
1968	32,097	10.5	677,786	9.3	3,691	9.7	3,401	8.2	108.5
1969	34,862	8.6	747,536	10.3	3,970	7.6	3,714	9.2	106.9
1970	35,975	3.2	803,922	7.5	4,044	1.9	3,945	6.2	102.5
1971	39,068	8.6	861,904	7.2	4,335	7.7	4,167	5.6	104.5
1972	43,282	10.8	944,852	9.6	4,796	10.1	4,515	8.4	106.2
1973	48,383	11.8	1,058,902	12.1	5,333	11.2	5,010	11.0	106.4
1974	51,750	7.0	1,162,203	9.8	5,681	6.5	5,448	8.7	104.3
1975	54,559	5.4	1,259,430	8.4	5,990	5.4	5,845	7.3	102.5
1976	61,333	12.4	1,386,772	10.1	6,727	12.3	6,374	9.1	105.5
1977	69,237	12.9	1,533,768	10.6	7,561	12.4	6,979	9.5	108.3
1978	77,567	12.0	1,717,816	12.0	8,429	11.5	7,735	10.8	109.0
1979	86,414	11.4	1,939,486	12.9	9,343	10.8	8,637	11.7	108.2
1980	92,339	6.9	2,162,936	11.5	9,950	6.5	9,521	10.2	104.5
1981[1]	100,101	8.4	2,406,700	11.3	10.792	8.5	10,495	10.2	102.8

[1] Estimate.

Source: U.S. Department of Commerce, Bureau of Economic Analysis. Michigan Department of Management and Budget.

1981. In real terms, this was a 1.5 percent decline, an even sharper real decline than that experienced in the durable goods industries.

Wage and salary growth in nonmanufacturing industries also reflected the weak economic activity in 1981, increasing only 6.1 percent to $26.2 billion. In real terms, this was a 2.9 percent decline. The construction industry experienced another difficult year as new home mortgage rates hit 18.5 percent and new home building was practically nonexistent. As a result, employment in the construction industry fell 6.7 percent, but inflationary wage increases kept total wages and salaries even with a year ago. On a real basis, construction wages and salaries fell 8.8 percent to bring the real decline during the last two years to 30 percent. The transportation, communication, and utility industries paid $3.4 billion in wages and salaries in 1981, up from $3.2 billion in 1980, but down one percent on a real basis. This fall in real activity was primarily due to the depressed transportation industry, as the slowdown in the motor vehicle industry adversely affected the trucking and other shipping industries. The wholesale and retail trade industries were hurt by the fall in real consumer spending. As a result, wages and salaries increased only 4.9 percent in wholesale trade and 7 percent in retail trade, for real declines of 4 percent and 2.1 percent, respectively. The service industry continued to be one of the fastest growing sectors of Michigan's economy during 1981. Despite the economic slowdown, employment rose 3.4 percent, which helped push wages and salaries up 8.4 percent to $9.9 billion.

The slowdown in economic activity also had a significant impact on government. The demands on the government in the form of services and aid greatly outdistanced the available revenues. This put tremendous strains on the budgets of governments at all levels and as a result government employment fell 1.5 percent in 1981. Modest pay increases, coupled with six lay-off days for state employees, held government wages and salaries to $9.7 billion, an increase of 4 percent, or a real decline of 4.9 percent.

In addition to wage and salary disbursements, individuals may also receive proprietors' income, other labor income, property income, and transfer payments. Proprietors' income is the income received by people who own their own business, including doctors, lawyers, farmers, and the owners of small retail or service establishments. In 1981, proprietors' income grew only 3.4 percent to $4.6 billion. This weak growth was primarily due to the devastating impact that the poor economic climate had on small retail businesses and farmers. Other labor income includes the income received by workers from insurance benefits, or disability pay. In 1981, other labor income rose 10.3 percent to $8.6 billion.

Property income is the income received by individuals from interest, dividends, and rent. The poor business climate in 1981 restricted the growth in income from dividends and rent, but high interest rates, caused a large gain in interest income. As a result, property income was the fastest growing income source in 1981 with an increase of 15.9 percent, to $14.9 billion.

Transfer payments rose approximately 12 percent in 1981 to $14.8 billion, compared with an increase of 25 percent in 1980. This slowdown in the growth of transfer payments was due, in part, to the fact that a large number of unemployed workers exhausted their unemployment benefits. In 1980, 62 percent of unemployed workers received unemployment benefits, but in 1981 this percentage fell to 41 percent. A second major reason for the slowdown in the growth of transfer payments was that the government was forced to tighten the eligibility requirements and reduce the benefits paid for social programs such as aid to families with dependent children (AFDC), and general assistance.

Thus, in 1981, the poor condition of the economy reduced the growth of personal income. An increase in social security taxes also reduced personal income growth. Social security contributions are a payroll tax that everyone must pay. In order to accurately measure the total income that individuals actually receive, these social security taxes are subtracted from total labor income. Since the social security tax rate rose to 6.65 percent from 6.13 percent and the income subject to the tax rose to $29,700 from $25,900 in 1981, total contributions increased 18 percent, compared with a gain of 9.5 percent in 1980. Therefore, the combined effects of increased taxes, limited wage increases, stagnant employment growth, and reduced business income restrained personal income growth in 1981.

1982 Outlook

Michigan's economy is expected to remain weak during the first half of 1982, but in the second half of the year economic activity is forecast to improve as an economic recovery emerges. Therefore, employment and earnings will remain depressed during the first part of 1982 and while employment will not recover much in the last part of the year, earnings should improve due to an increase in the average number of hours worked. As a result, wage and salary disbursements are expected to increase 3.7 percent in 1982, below the 6.6 percent rate of growth in 1981. (See Table 12.) Wages and salaries derived from the manufacturing industries are forecast to rise only 2.1 percent, as these industries continue to absorb a disproportionate share of the economic downturn. The nonmanufacturing industries and government are expected to increase their respective wage and salary payments by 4.7 percent and 5 percent in 1982.

Among the other income sources, nonfarm proprietors' income will be bolstered by the recovery in the last half of 1982, and farm proprietors' income is expected to remain unchanged in 1982 after falling 6 percent in 1981. Therefore, total proprietors income is forecast to rise 3.6 percent in 1982, compared to the 3.4 percent increase in 1981. Interest rates are expected to ease somewhat in 1982 and dividend payments are expected to remain weak, so property income is projected to increase 11 percent in 1982, slower than the 15.9 percent growth in 1981. Transfer payments are forecast to in-

TABLE 12
Michigan Personal Income, 1980, 1981 and 1982 Forecast
(Millions)

	1980	1981	1982 Forecast	Percent Change 1980-81	Percent Change 1981-82
Wage and Salary Disbursements by Place of Work	$57,082	$ 60,859	$ 63,096	6.6	3.7
Farms	174	179	186	2.9	4.0
Manufacturing	22,816	24,706	25,216	8.3	2.1
Durables	19,023	20,621	20,951	8.4	1.6
Nondurables	3,793	4,085	4,265	7.7	4.4
Nonmanufacturing	24,666	26,168	27,399	6.1	4.7
Contract Construction	2,383	2,396	2,384	0.5	-0.5
Trans., Comm. & Utilities	3,187	3,448	3,551	8.2	3.0
Wholesale Trade	3,141	3,296	3,494	4.9	6.0
Retail Trade	5,053	5,407	5,596	7.0	3.5
Finance, Ins. & Real Estate	2,271	2,328	2,412	2.5	3.6
Services	8,344	8,978	9,615	7.6	7.1
Mining	287	315	347	9.8	10.2
Government	9,324	9,697	10,182	4.0	5.0
Other Industries	102	109	113	6.9	3.7
Other Labor Income	7,814	8,619	9,102	10.3	5.6
Proprietors' Income	4,488	4,641	4,810	3.4	3.6
Farm	441	415	415	-5.9	0.0
Nonfarm	4,047	4,226	4,395	4.4	4.0
TOTAL Labor & Proprietors' Income by Place of Work	69,385	74,119	77,008	6.8	3.9
Less: Contributions for Social Insurance	3,606	4,255	4,510	18.0	6.0
Plus: Residence Adjustment	435	475	498	9.2	4.8
NET Labor & Proprietors' Income by Place of Residence	66,214	70,339	72,996	6.2	3.8
Property Income	12,867	14,913	16,553	15.9	11.0
Transfer Payments	13,258	14,849	16,928	12.0	14.0
TOTAL Personal Income	$92,339	$100,101	$106,477	8.4	6.4

Source: U.S. Department of Commerce, Bureau of Economic Analysis; Michigan Department of Management and Budget.

crease 14 percent in 1982, faster than the 12 percent increase in 1981. The poor economic conditions in the first half of the year will increase the number of individuals in need of assistance, and since an improvement in employment typically lags an economic recovery, there will not be much reduction in those needing public assistance during the last half of 1982. Contributions for social insurance, which are subtracted from total labor income to derive income actually received by workers, are expected to increase only 6 percent in 1982, compared with an 18 percent increase in 1981. This smaller increase is due to a relatively modest increase in the social security tax rate from 6.65 percent to 6.70 percent and the increase in the maximum taxable income from $29,700 to $31,800.

Overall, total personal income will increase 6.4 percent, compared with 8.4 percent in 1981. For the first time in three years, real personal income will increase. Due to the expected decline in inflation, personal income in 1982 will exceed the 1981 level by 1.6 percent.

PRICES

1981 Developments

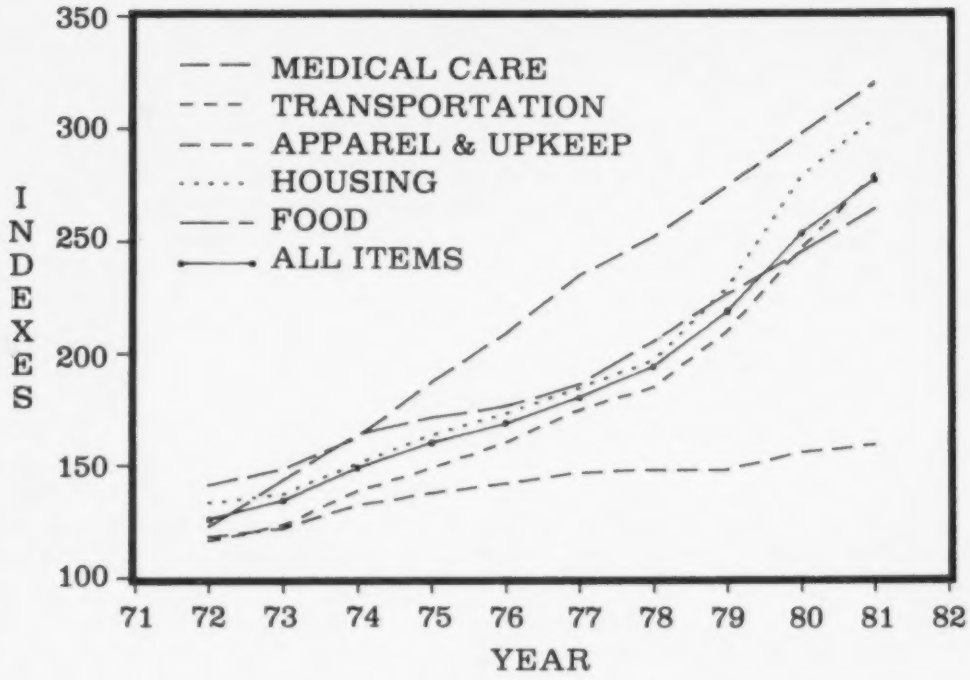
The bright spot in an otherwise dismal economy was the reduction of inflation in 1981. As measured by the Detroit Consumer Price Index (CPI) inflation declined from a 60-year high of 15.9 percent in 1980 to 9.3 percent in 1981. While inflation had been slowing throughout 1981, much of the decline occurred in the fourth quarter when prices actually fell, compared with the third quarter, at an annualized rate of 5.4 percent. The slowing in inflation occurred in all of the major sectors of the economy, as Table 13 illustrates.

The underlying force which reduced inflation in 1981 was the weak economy, which helped lower the price increases of petroleum and reduce labor costs. Large increases in petroleum prices had been the major catalyst behind inflation in recent years. From 1973 to 1980, oil prices increased at an average annual rate of 35 percent. But the curtailment in economic activity in the U.S. and other major industrialized countries during 1980 and 1981, reduced the demand for oil. In addition, conservation efforts and increased production of oil outside of the OPEC countries helped ease the upward pressure in oil prices. As a result, an oversupply of oil developed in 1981 and the rise in the prices of petroleum-based products slowed dramatically. The weak economy also helped lower rising labor costs. During 1980, labor costs were estimated to have risen 10 percent, but during 1981 the increase in the number of unemployed workers coupled with the deterioration of the financial condition of most businesses reduced the increase in labor costs to an estimated 8 to 9 percent.

Another important factor that helped reduce inflation in 1981 was an increase in productivity. In recent years, productivity had been declining, but in 1981 productivity improved by approximately one percent.

The slowdown in inflation in Michigan during 1981 occurred most dramatically in the housing sector. In 1980, housing-related prices rose 21.6 percent, but in 1981 the rate of increase fell to 9.2 percent. This large deceleration in housing-related prices was primarily due to the containment of the escalating prices of new homes. The fall in real incomes over the past few years greatly reduced the demand for new homes in 1981 and mortgage rates, which had climbed for four years, peaked in September at 18.5 percent and ended the year at 17.6 percent. Therefore, the homeownership component of the Detroit CPI, which rose 28.5 percent in 1980, rose only 8.1 percent in 1981. In addition, the homeownership index in December, 1981 was actually

CHART 1
Detroit Consumer Price Index, 1972-1981
(1967=100)



Source: U.S. Department of Labor, Bureau of Labor Statistics.

below its December, 1980 level by 6.2 percent. Heating costs negated some of the slowdown in homeownership prices, rising a hefty 16 percent. Much of the increase was due to the decontrol of oil and the partial decontrol of natural gas prices in the U.S.

Transportation prices rose 13.3 percent in 1981, down from the 17.5 percent increase in 1980. Gasoline prices edged up only 11.2 percent in 1981, after increasing 39 percent in 1980. Public transportation prices increased a sharp 17.6 percent, but this was below the 1980 advance of 22.5 percent.

Food prices edged up 7.7 percent in 1981, down slightly from the 8.3 percent rise in 1981. Excellent grain harvests in 1981 held the rise in the prices of cereal and bakery products to 8.6 percent, compared with 11.2 percent in 1980. The grain harvests also lowered the cost of feeding cattle, which, coupled with the decline in the demand for beef, due to the fall in real incomes, helped hold the price increase for meats to 6.5 percent.

1982 Outlook

In 1982, lower inflation will continue to be a favorable factor in the economic outlook. Petroleum supplies are expected to remain plentiful and therefore oil prices should increase only moderately. Productivity should again gain about one percent, due in part to the easing of business regulations and the tax incentives offered business capital formation. In addition, the weak economy in the first half of the year is expected to result in a further slowdown in the increase in labor costs. Interest rates are also expected to moderate in 1982 and food supplies are expected to be excellent, so food prices are forecast to rise at a somewhat slower rate than in 1981.

In addition to these factors, the current economic recession, which started in the second half of 1981, is diminishing demand in general and helping to ease the upward pressure on prices. In fact, during the fourth quarter of 1981, the Detroit CPI actually declined from the third quarter at an annual rate of 5.4 percent. This decline lowered the point at which the 1982 index began and will therefore lower the average index for 1982. As a result of this and the favorable factors mentioned above, the annual average increase in inflation, as measured by the Detroit CPI, is expected to moderate to 4.7 percent in 1982; however, a better perspective on inflation in 1982 can be gained by looking at the percentage change in prices from December, 1981 to December, 1982, which is forecast to be 8.3 percent.

CONSUMER SPENDING

1981 Developments

Consumer spending in 1981 reversed the downturn of 1980 and recorded moderate growth of 6 percent as measured by Michigan retail sales tax collections. (See Table 14.) Adjusted for inflation, real consumer spending actually fell 1.9 percent. Lackluster sales activity from the end of 1980 continued into the first quarter of 1981. By midsummer, sales were up about 12 percent compared with the year-ago level, but by fall, as interest rates approached record highs, sales activity again began to slow dramatically.

The major area of weakness in 1981 was in construction, as mortgage rates reached the 18 percent mark by year end. This slowdown was reflected by severely depressed building permits which, by the end of 1981, fell to less than one-third of the 1979 levels. The companion categories of building materials sales fell by more than 5 percent, and furniture sales increased by less than one percent.

Automobile sales jumped 15.4 percent for the year, due in part to summer price promotions which also resulted in sales being borrowed from future periods. The surge in auto sales was only temporary, however, as late-1981 auto sales reflected a worsening economy.

Energy sales remained strong throughout 1981 primarily due to price rather than consumption increases. Gas and electricity sales were up 14 percent, which helped push the nonretail category up 7.3 percent.

TABLE 14
Michigan Retail Sales Tax Collections, 1976-1982
(Millions)

Period	I	II	III	IV	Total	Percent Change
1976	$256.0	$271.3	$285.1	$282.2	$1,094.6	13.2
1977	293.0	307.0	326.7	326.7	1,253.4	14.5
1978	322.9	347.4	365.6	365.6	1,401.5	11.8
1979	362.3	375.5	391.2	389.0	1,518.0	8.3
1980	384.8	368.5	366.6	383.7	1,503.6	-0.9
1981	392.2	398.0	407.7	396.4	1,594.3	6.0
1982[1]	400.0	420.0	444.0	448.0	1,712.0	7.4

[1] Estimate.

Source: Michigan Department of Treasury and Department of Management and Budget.

TABLE 11
U.S. and Michigan Real Personal and Per Capita Income, 1950-1981[1]
(1967 Dollars)

Year	Real Michigan Personal Income (millions)	Percent Change	Real U.S. Personal Income (millions)	Percent Change	Real Michigan Per Capita Income	Percent Change	Real U.S. Per Capita Income	Percent Change	Real Michigan Per Capita Income as Percent of U.S. Real Per Capita Income
1950	$14,924	N.A.	$ 313,750	N.A.	$2,330	N.A.	$2,074	N.A.	112.3
1951	15,452	3.5	325,491	3.7	2,378	2.1	2,114	1.9	112.4
1952	16,171	4.7	339,332	4.3	2,431	2.2	2,180	3.1	111.5
1953	17,977	11.2	356,375	5.0	2,635	8.4	2,242	2.8	117.5
1954	17,441	-3.0	357,276	0.3	2,468	-6.3	2,217	-1.1	111.3
1955	19,343	10.9	384,372	7.6	2,656	7.6	2,328	5.0	114.1
1956	19,724	2.0	405,994	5.6	2,642	0.5	2,426	4.2	108.9
1957	19,571	-0.8	413,357	1.8	2,586	-2.1	2,426	0.0	106.6
1958	18,880	-3.5	412,170	-0.3	2,463	-4.8	2,366	-2.5	104.1
1959	20,046	6.2	435,297	5.6	2,581	4.8	2,457	3.8	105.0
1960	20,663	3.1	446,546	2.6	2,637	2.2	2,481	1.0	106.3
1961	20,484	-0.9	459,041	2.8	2,595	-1.6	2,509	1.1	103.4
1962	21,879	6.8	482,223	5.1	2,758	6.3	2,597	3.5	106.2
1963	23,129	5.7	500,627	3.8	2,870	4.1	2,656	2.3	108.1
1964	25,157	8.8	528,892	5.6	3,073	7.1	2,769	4.3	111.0
1965	27,415	9.0	562,986	6.4	3,281	6.8	2,910	5.1	112.7
1966	28,669	4.6	595,842	5.8	3,368	2.7	3,048	4.7	110.5
1967	29,046	1.3	620,020	4.1	3,366	-0.1	3,142	3.1	107.1
1968	30,774	5.9	650,466	4.9	3,539	5.1	3,264	3.9	108.4
1969	31,521	2.4	680,816	4.7	3,589	1.4	3,383	3.6	106.1
1970	30,643	-2.8	691,248	1.5	3,445	-4.0	3,392	0.3	101.6
1971	32,101	4.8	710,556	2.8	3,578	3.9	3,435	1.3	104.2
1972	34,296	6.8	754,072	6.1	3,800	6.2	3,603	4.9	105.5
1973	35,972	4.9	795,569	5.5	3,965	4.3	3,764	4.5	105.3
1974	34,708	-3.5	786,867	-1.1	3,810	-3.9	3,689	-2.0	103.3
1975	34,036	-1.9	781,284	-0.7	3,737	-1.9	3,626	-1.7	103.1
1976	36,313	6.7	813,356	4.1	3,983	6.6	3,738	3.1	106.6
1977	38,380	5.7	845,051	3.9	4,191	5.2	3,845	2.9	109.0
1978	39,962	4.1	879,128	4.0	4,343	3.6	3,959	3.0	109.7
1979	39,495	-1.2	892,128	1.5	4,270	-1.7	3,973	0.4	107.5
1980	36,426	-7.8	876,392	1.8	3,925	-8.1	3,858	-2.9	101.7
1981[2]	36,125	-0.8	883,517	0.8	3,895	-0.8	3,853	-0.1	101.7

[1] Michigan personal income deflated by Detroit CPI; U.S. personal income deflated by U.S. CPI.
[2] Estimate.

Source: U.S. Department of Commerce, Bureau of Economic Analysis. Michigan Department of Management and Budget.

TABLE 13
Detroit Consumer Price Index 1980, 1981 and 1982 Forecast
(Percent Changes)

	1980	1981		1982 Forecast	
	Annual Average	Dec. 80 to Dec. 81	Annual Average	Dec. 81 to Dec. 82	Annual Average
All Items	15.9	3.2	9.3	8.3	4.7
Food	8.3	5.0	7.7	7.8	7.0
Housing	21.6	-1.1	9.2	8.9	2.8
Home Ownership	28.5	-6.2	8.1	8.3	0.0
Fuels	18.2	8.8	16.0	10.5	6.0
Household Furnishings & Operations	7.9	8.8	9.0	6.5	6.7
Apparel and Upkeep	5.1	-1.9	2.2	4.3	2.0
Transportation	17.5	10.7	13.3	7.6	7.4
Private	17.3	10.7	13.1	7.1	7.2
Gasoline[1]	39.0	9.4	11.2	7.0	4.0
Public	22.5	8.5	17.6	9.0	6.4
Medical Care	8.5	7.1	7.5	7.5	6.3

[1]U.S. CPI.

Source: U.S. Department of Labor, Bureau of Labor Statistics; Michigan Department of Management and Budget.

TABLE 15
Michigan Retail Sales Tax Collections
By Component, 1980-1981[1]
(Millions)

Component	1980	Percent Change	1981	Percent Change
Building Materials	$ 100.7	-14.3	95.4	-5.3
General Merchandise	147.7	0.9	159.0	7.7
Automotive	341.2	-10.7	376.3	10.3
New and Used Vehicles	178.4	-26.7	205.9	15.4
Service Stations, Other	162.8	17.3	170.4	4.7
Food	246.5	6.8	256.9	4.2
Apparel	67.3	1.4	70.6	4.9
Furniture	68.0	-3.8	68.6	0.9
Miscellaneous Retail	149.9	1.1	155.1	3.5
Nonretail	389.6	7.4	418.2	7.3
Gas and Electricity	132.1	15.0	150.6	14.0
Wholesale Trade	31.8	-4.8	32.9	3.5
Petroleum and Products	39.2	18.4	43.5	11.0
Contract Construction	12.5	-10.1	11.7	-6.4
TOTAL	$1,510.9	-0.9	$1,600.1	5.9

[1] Includes penalty, interest, and license fees.

Source: Michigan Department of Treasury.

Although increased employment helped retail sales in the third quarter, the high cost of consumer credit and high prices contributed to a relatively weak level of sales activity in 1981. Availability of the new all-savers certificate contributed to a slightly higher savings rate among consumers and dampened retail sales in the final quarter of 1981.

1982 Outlook

Stronger growth in certain key economic indicators will promote increased consumer spending for 1982, mainly in the second half of the

year; however, after adjusting for inflation, spending will actually be only slightly improved over 1981.

The key determinant of consumer spending activity is personal income, forecast to increase 6.4 percent in 1982. Most of the increase will occur in the second half of 1982 when the second phase of the federal tax cut will become effective and social security benefits will be increased. The slow growth in federal income and social security taxes will produce a 7 percent increase in disposable personal income in 1982.

Inflation, as measured by the Detroit Consumer Price Index, will slow to 4.7 percent in 1982. This, combined with the 6.4 percent increase in personal income, will result in a 1.6 percent increase in real personal income. The reduced rate of inflation will also improve consumer sentiment and result in a small increase in sales activity, particularly in the second half of the year.

Although declining interest rates are expected to bolster consumer confidence, unemployment will remain high (peaking in the first quarter and averaging over 13 percent for the year), possibly offsetting any early gains that reduced interest rates might otherwise have brought. By year end, reduced interest rates will have encouraged an improvement in production and building activity, although interest rates are expected to post moderate gains in 1983. Auto sales are expected to increase nearly 15 percent as fuel supplies and prices remain favorable and housing starts are forecast to be up more than 9 percent in 1982.

Durable sales will gain strength by the fourth quarter of 1982 and consumer debt is expected to increase, particularly for auto purchases.

Although the new individual retirement accounts will tend to increase the savings rate, favorable interest rates and consumer desire to maintain living standards will result in a reduction in the savings rate by year end.

To summarize, consumer spending will increase less than 4 percent in the first half of 1982 as interest rates fall and consumer prices begin to slow. Partially offsetting these favorable signs, however, will be a slight increase in social security taxes and a high unemployment rate exceeding 14 percent. By the second half of 1982, personal income tax cuts and further moderating inflation will bolster real income and result in an 11 percent increase in consumer spending. Much of the increased spending activity will be, durable goods and in auto sales, both of which have been soft in recent years. These improvements will lead to an even stronger recovery in 1983.

POPULATION

1981 Developments

According to preliminary estimates, Michigan's population totaled 9,275,000 as of July 1, 1981. This represents a slight increase from the final census count of 9,262,078 in 1980. Population growth in Michigan has steadily slowed since 1970. Between 1970 and 1980, the growth rate was less than one-third the rate experienced between 1960 and 1970 and in 1981 the growth rate fell again to one-third the annual rate between 1970 and 1980.

Migration

The decline in Michigan's population growth in 1981 was primarily due to out-migration, as migration losses totaled about 75,000. This net out-migration was double the average rate experienced between 1970 and 1980 and reflected the impact of continuing economic hardship and high unemployment in Michigan since the end of 1979.

Net out-migration occurred mostly in metropolitan areas, which lost 442,300 people in the 1970s. Metropolitan counties which contain central cities lost 595,500 people through migration during this period. More specifically, Wayne County experienced a net out-migration of nearly one half million people during the 1970s and substantial out-migration also occurred in Genesee, Ingham, Muskegon, and Saginaw Counties (see Chart 2 and Table C-35). Washtenaw County was the only metropolitan county which gained some population through migration.

In the past ten years, without exception, all the counties on the fringe of metropolitan areas gained population through migration. Livingston County gained more than 50 percent and Lapeer county gained more than 20 percent in the ten-year period. Eaton, Macomb, Oakland, Ottawa, and St. Clair Counties also experienced substantial net gains in population.

Nonmetropolitan counties also experienced substantial net in-migration, which accounted for more than 60 percent of the growth in these counties during the 1970s. In particular, the northern half of the lower peninsula gained more people through migration than through natural increase (births exceeded deaths) and in Alcona, Lake, Oscoda, and Roscommon Counties migration accounted for 100 percent of the population growth, as deaths exceeded births. Surprisingly, Alpena is the only county in the northern lower peninsula which experienced net out-migration. Nonmetropolitan counties in the southern half of the lower peninsula experienced moderate net in-migration due to their close proximity to metropolitan areas. In the upper peninsula, some

counties experienced out-migration, while others experienced moderate net in-migration. In particular, Chippewa County lost 6,800 people through migration because of the closing of Kinchloe Air Force Base in 1977.

As Chart 2 shows, counties which experienced a tremendous influx of migrants are Kalkaska (92.6%), Roscommon (67%), Livingston (58.9%), Oscoda (45.0%), Gladwin (43.5%), Montmorency (40.8%), Clare (39.6%), Crawford (39.2%), Lake (38.5%), Alcona (38.6%), Ogemaw (35.7%), Missaukee (32.6%), Grand Traverse (31.1%), Otsego (32.9%), Benzie (28%), Mecosta (24.1%), Arenac (26.2%), Antrim (23.5%), Lapeer (22.3%), Osceola (20.5%), and Wexford (20.6%). All of these are located in the northern lower peninsula except Livingston and Lapeer Counties. These increases in net migration represent large influxes of people in only a ten-year period and this can create problems for these areas.

Michigan's migration patterns in the 1970s corresponded to national trends in which nonmetropolitan populations grew more rapidly than metropolitan populations. Only small metropolitan areas and southern metropolitan areas deviated from this trend.

The population of the United States shifted to the south and west during the past decade. All the states in the west and most of those in the south grew at a more rapid rate during the 1970s than the U.S. average of 11.4 percent. Forty-two percent of nationwide growth occurred in California, Florida, and Texas. Between 1970 and 1980, the northeast states lost 1.8 million people through out-migration, while the north central states, including Michigan, lost 1.3 million people through out-migration. In contrast, the south gained 5 million people and the west gained 3.5 million people through migration. Of course, the net migration to the south and west included a substantial amount of migrants from abroad. These population changes have moved 17 congressional seats from the north to the south and west.

Population Composition

During the past three decades, the composition of the population moving from Michigan changed. Between 1950 and 1960, the primary age group to experience a net loss in population due to out-migration was the group aged 65 and over. Gradually, younger age groups began to experience net losses as well. During the 1960s, the group aged 45 to 64 lost population through net out-migration and in the 1970s every age group except those aged 10 to 14 and those aged 30 to 34 lost population through net out-migration. The 20 to 44 year-old group lost more than 150,000 people through migration. Interestingly, the movement of those aged 65 and over did not increase in the 1970s, probably because more individuals retired to the northern lower peninsula and other rural areas in Michigan.

Michigan's population is getting older. Between 1970 and 1980, the median age of the population increased from 26.3 years to 28.9 years. Lower fertility rates and out-migration in the past decade reduced the

CHART 2
Michigan Population Migration, 1970-1980

Source: U.S. Department of Commerce, Bureau of the Census.

population of children aged 0 to 14 years by about a half million between 1970 and 1980. The number of births in Michigan declined dramatically from 171,700 in 1970 to 131,000 in 1976. Although a slight increase in births has been recorded since 1977, the total was still significantly lower than that recorded in the early 1970s. At the same time, the population aged 65 and over increased by 21 percent from 749,719 people in 1970 to 912,321 in 1980. Almost one in every 10 people is now 65 years old and over, compared with one in every 12 people ten years ago. Despite losing 150,000 people from out-migration, the population aged 20 to 44 increased 23 percent from 2.8 million to 3.4 million in the past decade, due to the baby boom in the 1950s and early 1960s.

Michigan's changing population stems not only from an increase in the number of older citizens, but also from an increase in the number of minorities. Between 1970 and 1980, nonwhite populations in Michigan grew faster than the white population. The number of black citizens increased 21 percent and surpassed the one million mark (1,199,023). The black population now represents about 13 percent of Michigan's total population. The white population grew only one percent, but still constitutes 86 percent of Michigan's total population. In 1980, 1.8 percent of Michigan's total population consisted of people of Spanish origin. Although other racial groups increased 210 percent in the past 10 years, they represent only 1.3 percent of the population. According to the 1980 census, Michigan's minority populations included the following number of people: Spanish origin (162,440), American Indian (39,714), Asian Indian (14,690), Filipinos (11,166), Chinese (11,009), Korean (8,714), Japanese (5,872) and Vietnamese (4,209).

Most minority populations reside in metropolitan areas, particularly in counties containing metropolitan central cities. All metropolitan central counties including the recently designated Benton Harbor Metropolitan Area, together experienced a reduction of white population and an increase in black and other racial groups. About three quarters of the blacks and half of the people of Spanish origin reside in the Detroit Metropolitan Area. In the City of Detroit, the black population increased 14.6 percent from 663,000 to 759,900 people between 1970 and 1980 and composed 63 percent of the city's population. The white population decreased 49.3 percent from 838,900 in 1970 to 425,300 people in 1980. Almost every other metropolitan central city experienced declining white populations except Ann Arbor; however, in the past 10 years, counties on the fringes of metropolitan areas experienced substantial increases in their minority populations.

Despite the low rate of population growth in Michigan, the number of households increased 20 percent from 2,613,059 in 1970 to 3,195,015 in 1980. The number of persons residing in each household dropped from 3.27 to 2.84 in the 10-year period. People living alone or with other unrelated persons increased 70 percent. About one fourth of the total households in Michigan now consist of primary individual or unrelated persons. Family households are down from 82 percent of total households in 1970 to 75 percent in 1980. Another big change is

t'.e increase in one-parent households. Female householders without husbands, in particular, increased from 211,300 to 360,200. Children under 18 in the one-parent families also increased from 331,400 to 508,100. Ten years ago, one in every 10 children under 18 lived in one-parent families, and today, one in every 5 to 6 children under 18 live in this type of family. These changes in household and family composition, accompanied by the economic hardship in Michigan, have had serious impacts on welfare caseloads and other human services. In 1981, one in every 8 or 9 persons received some form of public assistance in Michigan.

1982 Outlook

Michigan has suffered extraordinary economic difficulties and has experienced high rates of unemployment since the end of 1979. An increase in out-migration between 1980 and 1981 reflected the impact of the 1980 recession. This out-migration may continue in 1982 because double-digit unemployment rates prevailed during the past two years, topping 15 percent in December, 1981. Government budget reductions in certain employment and welfare programs may also make it more difficult for the unemployed to remain in Michigan, waiting for economic recovery. Therefore, out-migration from Michigan in 1982 is expected to continue at the same rate, if not higher, as experienced in 1981. The number of births in the first three quarters of 1981 was 106,300, about a 4 percent decline from the comparable period of 1980. At the same time, the number of deaths in the first 9 months of 1981, 56,400, was more than the 55,740 deaths in the same period in 1980. Thus, natural increase in 1982 is expected to be slightly lower than in 1981. Taking these conditions into account, Michigan's population is expected to be approximately 9.27 million by July, 1982, a slight decline from 1981.

STATE AND REGIONAL COMPARISONS

1981 Developments

In 1981, Michigan was among the states hardest hit by the recession, as illustrated by a comparison of total and per capita personal income, employment and unemployment rates with other states. Although unemployment continued to increase in most states, the recession was particularly severe in the midwest and northeast due to weakness in the auto and steel industries, both large employers in these regions. In contrast, states in the south and west were less affected by the recession since their economies are more diversified with industries less vulnerable to recessions, such as energy and defense.

Michigan's growth rate of employees on nonagricultural payrolls lagged behind the U.S. average of 1.3 percent. Changes in the level of employment for Michigan and other selected states are shown in the accompanying Table 16. From October, 1979 to October, 1980, the number of Michigan employees on nonagricultural payrolls dropped from 3,645,300 to 3,491,400, or 4.2 percent. Similarly, the level of these employees dipped slightly from 3,491,400 to 3,471,900, or 0.6 percent from October, 1980 to October, 1981.

Like Michigan, states such as Illinois, Indiana, Ohio, and Pennsylvania employ between 24 and 31 percent of their employees in the auto and steel industries. Thus, lower levels of employment in these industries resulted in higher unemployment rates.

In contrast, the states of Texas and Florida boasted employment growth of 4 and 4.5 percent, respectively, during the October, 1980 to October, 1981 period.

In October, 1981, Michigan's jobless rate was 11.5 percent, a slight improvement over the 12.4 percent rate registered the same month a year earlier. This improvement was temporary, however, since the unemployment rate rose to 15.4 percent in December, 1981, for an annual average of 12.3 percent. The national unemployment rate of 8 percent, in October, 1981, was significantly lower than Michigan's for the same period.

States with unemployment rates below the national average include California, New York, Texas, and Wisconsin. Unemployment was comparatively low in the mature industrial states of New York and Wisconsin, in part, because they employ only a small percentage of their labor force in motor vehicle production. Texas and California had low unemployment rates because the recession had little impact on employment in the aerospace, energy, and other high-technology industries.

TABLE 17
Personal Income in Selected States, 1979, 1980, and First Half 1980 and 1981
(Seasonally adjusted in billions)

State	1979	1980	Percent Change	Jan.-June 1980	Jan.-June 1981	Percent Change
California	$ 228.5	$ 259.6	13.6	$ 249.2	$ 277.5	11.4
Florida	76.3	88.7	16.3	83.4	96.8	16.1
Illinois	110.6	120.4	8.9	117.6	130.3	10.8
Indiana	45.8	49.2	7.4	48.0	53.3	11.0
MICHIGAN	86.4	92.3	6.8	88.8	99.0	11.5[1]
New York	161.6	180.6	11.8	173.0	192.0	11.0
Ohio	94.0	102.4	8.9	98.7	109.1	10.5
Pennsylvania	101.6	112.2	10.4	107.6	117.9	9.6
Texas	117.9	136.1	15.4	129.9	149.3	14.9
Wisconsin	40.3	44.1	9.4	42.4	46.8	10.4
United States	1,939.5	2,162.9	11.5	2,075.6	2,316.5	11.6

[1]Employment, earnings, and tax collections data for Michigan indicate this growth rate is too high. A more accurate estimate of personal income growth is 8.4 percent.

Source: *Survey of Current Business*, U.S. Department of Commerce, Bureau of Economic Analysis, July and October, 1981.

Personal income in Michigan increased from $86.4 to $92.3 billion, or 6.8 percent, from 1979 to 1980. In 1981, personal income grew from $88.8 to $99 billion, or 11.4 percent in the first half of 1981 compared with the first half of 1980. However, data on Michigan employment, earnings, and tax collections indicate that this growth rate is too high. It is estimated that personal income in Michigan actually grew 8.4 percent. Despite this weakness, the data provide a basis for comparison of personal income levels across states and regions. (See Table 17.)

As in prior years, growth rates of personal income fell below the rate of inflation, and thus, workers did not realize real gains in income. In addition, real personal income is still well below the 1978 peak.

In the great lakes region, personal income increased 8.3 percent from 1979 to 1980. More recent statistics report that personal income in the great lakes region grew by 10.9 percent when comparing the first half of 1980 with the same period in 1981. Regions in the mideast and plains actually grew at lower rates than the great lakes region.

The southwestern economy is booming when compared with other parts of the country due to the beneficial effects of the energy

TABLE 18
Personal Income by Region,
1979, 1980, and First Half 1980 and 1981
(Seasonally adjusted in billions)

Region	1979	1980	Percent Change	Jan.-June 1980	Jan.-June 1981	Percent Change
Far West	$ 296.3	$ 335.4	13.2	$ 322.8	$ 359.7	11.4
GREAT LAKES	377.1	408.5	8.3	395.5	438.6	10.9
Mideast	387.4	431.7	11.4	412.8	457.0	10.7
New England	110.8	125.1	12.9	119.3	132.9	11.4
Plains	147.4	160.9	9.2	153.8	168.1	9.3
Rocky Mts.	53.1	59.7	12.4	57.2	64.7	13.1
Southeast	381.9	428.8	12.3	411.1	463.3	12.7
Southwest	172.3	198.0	14.9	189.3	216.5	14.4
United States	1,939.5	2,163.0	11.5	2,075.6	2,316.5	11.6

Source: *Survey of Current Business*, U.S. Department of Commerce, Bureau of Economic Analysis, July and October, 1981.

TABLE 19
Per Capita Personal Income in Selected States, 1979 and 1980

State	1979	1980	Percent Change	Percent of National Average 1979	Percent of National Average 1980
California	$9,825	$10,938	11.3	114	115
Florida	8,053	8,996	11.7	93	94
Illinois	9,683	10,521	8.7	112	111
Indiana	8,365	8,936	6.8	97	94
MICHIGAN	9,343	9,950	6.5	108	105
New York	9,756	10,924	12.0	113	115
Ohio	8,703	9,462	8.7	101	99
Pennsylvania	8,555	9,434	10.3	99	99
Texas	8,493	9,545	12.4	98	100
Wisconsin	8,646	9,348	8.1	100	98
United States	8,637	9,521	10.2	100	100

Source: *Survey of Current Business*, U.S. Department of Commerce, Bureau of Economic Analysis, July, 1981.

industry. Consequently, personal income growth was especially strong in both 1980 and 1981, reaching growth rates of over 14 percent in both years.

In 1980, Michigan's per capita personal income increased 6.5 percent over the previous year. Even though Michigan's growth rate has slowed in recent years, per capita income for Michigan was 5 percent above the U.S. average in 1980. Nevertheless, since 1978 Michigan's per capita income has dropped closer to the U.S. average.

Likewise, per capita income in the great lakes region was 3 percent above the national average. Per capita income in the great lakes region increased from $9,063 to $9,779, or 7.9 percent from 1979 to 1980.

While per capita income growth for the great lakes slowed, per capita incomes in the southeast and southwest regions gained momentum, increasing 10.4 and 12 percent, respectively. Both growth rates exceeded the U.S. average.

As illustrated in Table 20, great lakes per capita personal income as a percentage of the U.S. average dropped by two percentage points from 1979 to 1980. Conversely, per capita income in the southwest increased by two percentage points. This phenomenon can be partially explained by two factors. First, the northeast and midwest grow only during prosperous times, while some regions grow even during periods of recession. Second, regions with increasing per capita incomes receive more in federal government expenditures than they pay in federal taxes, while the opposite is true for the midwest and northeast regions.

TABLE 20
Per Capita Personal Income by Region, 1979 and 1980

Region	1979	1980	Percent Change	Percent of National Average 1979	Percent of National Average 1980
Far West	$9,678	$10,713	10.7	112	113
GREAT LAKES	9,063	9,779	7.9	105	103
Mideast	9,145	10,912	19.3	106	115
New England	8,978	10,105	12.6	104	106
Plains	8,620	9,338	8.3	100	98
Rocky Mountain	8,243	9,095	10.3	95	96
Southeast	7,348	8,111	10.4	85	85
Southwest	8,292	9,284	12.0	96	98
United States	8,637	9,521	10.2	100	100

Source: *Survey of Current Business*, U.S. Department of Commerce, Bureau of Economic Analysis, July, 1981.

TABLE 16
Employment and Unemployment Rates in Selected States, 1980 and 1981
(Thousands)

State	October, 1980		October, 1981		Percent Change in Employment	Percentage Point Change in Unemployment rate	Percent Change in Manuf. Emp.	Percent Employed in Manuf.
	Employment[1]	Unemployment rate	Employment[1]	Unemployment rate				
California	9,872.5	6.8	9,993.1	7.6	1.2	0.8	-1.5	19.8
Florida	3,606.5	7.1	3,767.4	7.8	4.5	0.7	2.5	12.5
Illinois	4,881.9	9.0	4,865.2	8.1	-0.3	-0.9	-2.5	24.0
Indiana	2,143.2	8.9	2,128.4	9.8	-0.7	0.9	0.5	30.8
MICHIGAN	3,491.4	12.4	3,471.9	11.5	-0.6	-0.9	-2.0	29.0
New York	7,243.4	7.3	7,278.8	6.7	0.5	-0.6	-1.0	19.8
Ohio	4,413.3	8.3	4,407.5	9.9	-0.1	1.6	-0.6	28.1
Pennsylvania	4,764.6	7.6	4,681.0	8.5	-1.8	0.9	-1.8	27.4
Texas	5,975.6	4.5	6,212.8	4.6	4.0	0.1	2.7	17.5
Wisconsin	1,960.3	6.3	1,969.2	7.5	0.5	1.2	-1.1	27.7
United States[2]	91,244.0	7.6	92,389.0	8.0	1.3	0.4	0.6	22.0

[1]Employees on non-agricultural payrolls.

[2]Seasonally adjusted.

Source: *Employment and Earnings*, U.S. Department of Labor, Bureau of Labor Statistics, November and December, 1981.

While regional differences in per capita personal income have diminished, a new disparity may develop between energy-rich and energy-poor regions if federal programs are turned back to the states as has been proposed. Regions bearing the brunt of federal reductions, in the north and east, are least able to finance these new programs, because of a slow-growing tax base. In contrast, energy-rich states such as Texas, Louisiana, and Montana have abundant revenues from severance taxes on oil, gas, and coal. These states are in a better position to absorb the cost of federal programs because most severance taxes are exported to other states.

1982 Outlook

In the near term, as the Michigan economy improves, and auto production steps up, growth rates for personal income and employment are expected to match national rates. In 1982, the growth of Michigan employment in the manufacturing industries is projected to decline 1.9 percent, while total nonagricultural employment is expected to increase 1.6 percent. However, unemployment rates will continue to exceed those in other states and regions.

In the long term, growth in Michigan and the great lakes region is expected to lag behind growth in the south and west. Through the mid-1980s, employment growth is projected to be weak in the manufacturing sector until motor vehicle sales reach previous levels.

Currently, Michigan is attempting to diversify the state's economy away from the auto and steel industries which have suffered declines due to high energy costs, foreign competition, and plant obsolescence. By expanding employment opportunities in more growth-oriented industries, such as electronics, molecular biology, and robotics, Michigan will become less susceptible to high unemployment during economic downturns.

MICHIGAN SECTOR ANALYSIS

- Motor Vehicle and Equipment Industry
- Energy
- Finance
- Construction
- Agriculture
- Mineral Supplies and Mining
- Transportation
- Tourism
- International Trade

MOTOR VEHICLE AND EQUIPMENT INDUSTRY

1981 Developments

Although record-high interest rates curtailed a recovery of the U.S. economy, including the motor vehicle sector, Michigan's motor vehicle sector showed marked improvement in 1981. In 1981, total U.S. motor vehicle production was down slightly from 1980's depressed level, whereas, Michigan motor vehicle production was up 16 percent. In sharp contrast, in 1980, U.S. production was down 30 percent compared with a nearly 40 percent slide in Michigan. The turnaround in Michigan resulted from the shift in the production mix away from large cars and trucks to smaller, more fuel-efficient products that are in step with the U.S. market. The expected national economic recovery, stimulated by federal mid-year tax cuts, is expected to generate motor vehicle sales. Given the mix shift that has already occurred in Michigan, the state is in an excellent position to benefit from the increased sales.

U.S. Production and Sales

After falling over 20 percent in 1980, U.S. motor vehicle sales declined an additional 3.7 percent in 1981. Total passenger car sales were down 5 percent and truck sales gained 1.1 percent. Totally, 10.8 million motor vehicles were sold in 1981, including 8.5 million passenger cars and 2.3 million trucks. Imports continued to play an important role in the U.S. markets. Foreign manufacturers retailed 2.3 million cars and 448,000 trucks. Imports captured over 27 percent of the auto market and over 19 percent of the truck market. Most of the loss in sales, therefore, occurred in the domestic segment of the market. Table 21 provides a summary of these details.

The pattern of auto sales in 1981 was strikingly similar to that of the previous year. In each case, the year began with robust sales running above an annual rate of 10 million units. These sales rates were the result of promotional campaigns designed to reduce inventories which had built up at the start of the model year during the fourth quarter of the previous year. The car manufacturers were optimistic in both years that the recovery in the economy and auto sales, which appeared to be budding at the start of their model year, would gain momentum. In both 1980 and 1981, the turn of the year brought recession.

While the incentive programs were successful in stimulating sales and reducing stock until production could be pared down in line with the sales pace, they did so at the expense of sales in future periods. As a result, sales plunged in the spring, especially for domestic products. Rapidly rising interest rates and a deteriorating economy

continued to depress sales further during the summer. In another round of promotions, sales of domestic products were temporarily stimulated but the sales spurt was once again followed by a severely depressed market. Those that were planning to buy a car in the fall simply bought in the summer to take advantage of the price reductions and rebates, drying up the fall market. By year end, sales of domestic cars fell below the 5-million-unit mark set at the bottom of the 1980 sales slump. As 1982 unfolds, a large inventory of unsold domestic cars has caused manufacturers to offer a similar package of rebates; however, sales continue to be depressed because of the significant weakness in the economy.

TABLE 21
U.S. Motor Vehicle Production and Sales, 1979-1982
(Thousands)

	Calendar Years				Model Year
	1979	1980	1981[1]	1982[1]	1982[1]
Production	11,481	8,008	7,944	9,010	8,460
Passenger Cars	8,434	6,375	6,271	6,810	6,360
Trucks	3,047	1,633	1,673	2,200	2,100
Sales	14,131	11,205	10,788	11,850	11,150
Passenger Cars	10,651	8,973	8,531	9,200	8,600
Domestic	8,325	6,578	6,206	6,810	6,360
Import	2,236	2,395	2,325	2,390	2,240
Trucks	3,480	2,232	2,257	2,650	2,550
Domestic	3,010	1,797	1,809	2,200	2,100
Import	470	435	448	450	450

[1]Estimates.

Sources: *Motor Vehicle Production Reports* and *Motor Vehicle Facts and Figures*, Motor Vehicle Manufacturers Association of the U.S., Inc., selected issues. *Automotive News*, Crain Automotive Group, Inc., selected issues.

Another similarity between 1980 and 1981 auto sales was the mix of passenger cars that were sold. As Table 22 illustrates, domestic subcompacts and imports increased their market share slightly as domestic compacts, intermediates, and full-size cars suffered a slight loss in market share. The important shift to smaller cars is vividly shown in a comparison between the sales mix in 1979 and 1981. The

TABLE 22
U.S. Motor Vehicle Sales Mix, 1979-1982
(Percent)

	Calendar Years			
	1979	1980	1981	1982[1]
Passenger Cars	100.0	100.0	100.0	100.0
Subcompact	12.9	15.4	17.1	18.0
Compact	20.9	21.0	20.2	20.0
Intermediate	23.8	21.4	20.4	21.0
Full-size	20.6	15.5	15.0	15.0
Import	21.8	26.7	27.3	26.0
Trucks	100.0	100.0	100.0	100.0
Light Duty	75.7	69.7	70.2	74.0
Medium Duty	4.4	3.7	3.3	3.0
Heavy Duty	6.4	7.0	6.7	6.0
Import	13.5	19.5	19.8	17.0

[1] Estimates.

Source: *Automotive News*, Crain Automotive Group, Inc., selected issues; *Ward's Automotive Report's*, Wards Communications, Inc., selected issues.

market share of subcompact cars increased from 12.9 percent to 17.1 percent over the two-year period. At the same time, full-size cars lost over 5 percentage points of the market and intermediates lost over 3 percent. The movement to smaller, more fuel-efficient cars is closely correlated with the sharp rise in the price of gasoline that occurred as a result of the Iranian revolt in 1979 and the decontrol of domestic gasoline prices in 1980. The increased availability of domestically-produced small cars provided consumers with a U.S. made substitute to the traditional domestic product.

In the truck market, there were no fuel-efficient substitutes for consumers to turn to and truck sales continued to slide in 1981. Also, the commercial demand for trucks of all sizes was depressed by high interest rates and a weak economy which dampened business investment, including vehicles.

Passenger car and truck production in the U.S. reflected the sales picture depicted above. In Table 21, production for 1981 is compared to the two previous years. Total production was down less than one percent in 1981 from 1980 but down over 30 percent from 1979 levels. In 1981, 7.9 million motor vehicles were produced. Car and truck production levels were 6.3 million and 1.7 million, respectively.

Michigan Production

Michigan car and truck production rebounded sharply from the low levels of production recorded during the 1980 recession; however, although 1981 production showed improvement, it was still well below the 1979 level. In 1981, Michigan produced 2.5 million motor vehicles, which was a gain of 16 percent from 1980, but a decline of 29 percent from 1979. Michigan's share of U.S. production rose from 27 percent in 1980 to 31.5 percent in 1981. Car production in Michigan totaled 2 million units which accounted for 32.6 percent of U.S. car production. Michigan produced 458,000 trucks, or 27.4 percent of the U.S. total. Table 23 provides a summary of the data.

TABLE 23
Michigan Motor Vehicle Production, 1979-1982
(Thousands)

	Calendar Years				Model Year
	1979	1980	1981	1982[1]	1982[1]
Production					
Passenger Cars	2,527	1,726	2,047	2,315	2,162
Percent of U.S.	30.0	27.1	32.6	34.0	34.0
Trucks	996	433	458	635	605
Percent of U.S.	32.7	26.5	27.4	28.9	28.8
Total	3,523	2,159	2,505	2,950	2,767
Percent of U.S.	30.7	27.0	31.5	32.7	32.7

[1] Estimates.

Source: Michigan Department of Management and Budget and *Michigan State Economic Record*, Michigan State University.

The production gains in Michigan, in contrast to a slight decline in U.S. production, were the result of a dramatic shift in the production mix of passenger cars. As Table 24 illustrates, 13.2 percent of Michigan auto production was accounted for by subcompact cars, specifically the Ford Escort and Lynx. In the previous two years, as shown in the table, no subcompact cars were produced in the state. Full-size products produced in the state were reduced to 29.3 percent of production, down 45.6 percent in 1979.

In addition, passenger car production accounted for 81.7 percent of total production, with trucks accounting for the balance. The reduced

TABLE 24
Michigan Motor Vehicle Production Mix, 1979-1982
(Percent)

	Model Years			
	1979	1980	1981	1982[1]
Passenger Cars	100.0	100.0	100.0	100.0
Subcompact	0.0	0.0	13.2	13.5
Compact	35.7	40.4	34.2	34.5
Intermediate	18.7	24.9	23.2	23.0
Full-size	45.6	34.7	29.3	29.0
Motor Vehicles	100.0	100.0	100.0	100.0
Passenger Cars	69.6	78.2	78.2	78.0
Trucks	30.4	21.8	21.8	22.0

[1]Estimates.

Source: Michigan Department of Management and Budget.

share of truck production is a direct result of the slumping truck market over the last two years.

1982 Outlook

Improvement in economic activity is not expected until mid-year, when federal individual income tax rates will be cut by 10 percent. A similar cut is expected for July, 1983. These individual tax cuts will significantly increase disposable income and consumer spending. In addition, federal business tax cuts, which were initially effective at the start of the year, are expected to generate additional business investment as the economy begins to grow. While economic activity for the year as a whole is only expected to exhibit a modest recovery from the current recession, the recovery should be gaining momentum by year end, with 1983 showing healthly gains.

Total motor vehicle sales are expected to benefit from the increased consumer and business spending. This sector of the economy will also benefit from the sharp declines in the rate of inflation. Lower rates of inflation increase the real purchasing power of the consumer. An important aspect of lower inflation especially relevant to the motor vehicle sector is stable gasoline prices. Recent declines in the demand for world oil supplies resulting from conservation because of higher prices and reduced usage stemming from the recession have lead to a very favorable energy environment for the vehicle markets.

TABLE 25
Michigan Passenger Car Plants, Model Year 1982

Manufacturer/Product	Location	Percent of Michigan Production[1]
Checker	Michigan	0.1
Checker	Kalamazoo	0.1
Chrysler	Michigan	11.0
Aires, Reliant, Le Baron	Detroit	11.0
Ford	Michigan	25.0
Mustang, Capri	Dearborn	8.0
Escort, Lynx	Wayne	13.5
Continental, Mark VI	Wixom	3.5
General Motors	Michigan	63.9
Cadillac Deville	Detroit	7.0
Regal	Flint	7.5
La Sabre, Electra	Flint	6.3
Cutlass	Lansing	7.3
Oldsmobile 88, 98	Lansing	12.3
Bonneville G	Pontiac	3.5
Grand Prix	Pontiac	4.5
Omega, Skylark	Willow Run	15.5

[1] Estimates.

Source: Michigan Department of Management and Budget.

Since the levels of car and truck sales have been depressed for the past two years, demand for replacement of worn stock has been building. For example, it is estimated that 3.5 million units of pent-up demand exist in the auto market alone. People have not kept up with the usual replacement of vehicles for several reasons. Until recently, there was a lack of adequate fuel-efficient substitutes for the traditionally large, U.S. family sedan. The larger, older domestic products satisfied this demand. These older cars use leaded gasoline which has not been subject to the spot shortages of unleaded varieties during periods of energy disruptions. Leaded gasoline is also less expensive. Finally, although the older cars are not as fuel efficient as the newer models, some may be cheaper to operate when costs are defined to include higher prices for the new vehicles and higher

interest rates for financing. For these reasons, there are 50 percent more cars on the road that are eight-years old or older today than there were in 1970.

In 1982, total motor vehicle sales are expected to increase 9.8 percent. Passenger car sales are expected to rise 7.8 percent with truck sales gaining 17.4 percent. Much of the gain is expected to occur in the second half of the year following the federal tax cut. The mix of products sold in both the car and truck markets is not expected to change significantly in 1982. In the car market, imports are expected to continue capturing over 25 percent of U.S. sales; however, in the truck market, import sales are expected to receed about 3 percentage points with the introduction of domestically made mini pick-up trucks by each of the domestic manufacturers. This will be a hotly contested segment of the truck market and domestic manufacturers are expected to gain a larger share as the market grows in 1983.

TABLE 26
Michigan Truck Plants, Model Year 1982

Manufacturer/Product	Location	Percent of Michigan Production[1]
Chrysler	Michigan	18.0
Light Duty	Warren	18.0
Ford	Michigan	15.0
Light Duty	Wayne	15.0
General Motors	Michigan	67.0
Light, Medium, Heavy Duty	Pontiac	24.0
Light Duty	Flint	40.0
Light Duty	Detroit	3.0

[1] Estimates.

Source: Michigan Department of Management and Budget.

U.S. production will reflect sales activity and based on the above sales forecast, car production will improve 8.6 percent and truck production is forecast to increase 31.5 percent. Production gains are slightly higher than the sales gains cited above because of the marginally better sales performance expected by the domestic products. Tables 21 and 22 presented earlier depict sales and production forecast details.

Michigan motor vehicle production is expected to gain 17.8 percent in 1982 as a result of the general improvement in the market for domestic products and the mix of cars and trucks currently produced in the state. Michigan's share of U.S. production is expected to increase to 32.7 percent. The Michigan production line-up for cars and trucks is given in Tables 23 and 24. Other forecast detail with respect to the state is presented in Tables 25 and 26.

ENERGY

1981 Developments

Michigan energy supplies remained sufficient to meet the reduced energy demand of 1981. The key developments during the year were the decontrol of crude oil prices, higher energy prices, and the economic slowdown, all of which reduced energy demand.

Michigan has few fossil-fuel resources of its own and, therefore, must import almost 90 percent of its energy needs. Just as the national importation of oil results in a large transfer of wealth from the United States to countries overseas, Michigan's energy imports also result in a large transfer of wealth out of the state to energy-producing states and nations. This transfer out of Michigan totals over $8.2 billion per year and represents eight percent of the gross state product. In relative terms, this transfer presents a greater problem than that faced by the nation as a whole.

To combat this transfer of wealth out of Michigan, state government has begun efforts to conserve energy use including the community energy management program, home weatherization program for low-income residents, and the state physical facilities energy management program. Through the weatherization program, more than 23,500 homes were made more energy efficient in 1980 and 1981. The state has saved more than $44.7 million since 1973 through energy conservation measures in state buildings and facilities.

Due to the continued rising cost of energy and the impact of natural gas decontrol, the state income tax credit for heating-fuel costs was extended until the 1983 tax year. This tax credit helps low-income households pay their home-heating bills. Legislation was also enacted to allow the use of money saved by energy conservation in state buildings to be reserved for additional energy conservation measures in that facility; however, it was ruled that this legislation amended the appropriations process by reference and new legislation has been proposed to overcome the problems identified in the original bill. Further discussion on fuel prices and other 1981 developments are highlighted in the following paragraphs.

Crude Oil

The average international price of crude oil declined over the course of 1981 by $1.31 per barrel. On January 1, 1981, the average world price was $35.49 per barrel, by January 1, 1982, it declined to $34.18. With the decontrol of oil in early 1981, the price of domestic crude rose $4 a barrel. This increase was in part responsible for the jump in the price of refined petroleum products which occurred at that time.

The decline in world prices over 1981 was responsible for the drop in prices during the last six months of the year.

In October, 1981, OPEC agreed to a unified oil price with a $34 per barrel benchmark for Saudi Arabian oil, previously $32 per barrel. A top price for quality grade was set at $38 per barrel. OPEC also agreed to maintain this new price structure until the end of 1982. Saudi Arabia in turn agreed to reduce its crude oil production to 8.5 million barrels a day. Earlier in 1981, Saudi Arabia had produced 10.5 million barrels a day in a successful bid to force other OPEC nations to adopt a unified price.

Gasoline

With the decontrol of oil, gasoline prices rose 15¢ during the first quarter of 1981. However, between April and December, the price declined by 5¢ a gallon. This meant the increase in the cost for gasoline (approximately 7 percent over the course of the year) was less than the rate of inflation. In January, 1981, the cost of unleaded gasoline in Michigan was $1.35 per gallon, compared with $1.45 per gallon in January, 1982.

Michigan gasoline consumption in 1981 totaled approximately 3.8 billion gallons, a 5.8 percent decline from 1980, and a 25 percent decline from 1978. More fuel-efficient vehicles on the road caused most of the decline. Michigan's vehicles averaged 16 miles per gallon in 1981, a 3.2 percent increase from the 1980 average of 15.5 miles per gallon. The remainder of the decline in gasoline consumption can be attributed to reductions in discretionary driving and the continued low level of economic activity within the state.

Electricity

Electricity sales barely edged upward in 1981 as the number of customers remained constant and demand remained weak. Fewer customers choose electricity for home-heating as natural gas becomes available and this kept the number of customers constant in 1981. Industrial and commercial sales were up considerably as shown in Table 28; however, much of this increase, stemmed from price hikes.

New lifeline electricity rates have actually reduced energy costs for small-volume consumers, although large users faced substantial price increases in 1981. Utilities were faced with higher costs due to new wage contracts for United Mine Workers and higher fuel costs. The summer mine workers strike posed a temporary disruption in coal supplies, although the disruption was short-lived.

Fuel Oil

Fuel oil consumption declined approximately 12 percent during 1981. Consumption of kerosene, home-heating oil, and diesel fuel totaled approximately 884 million gallons. Home-heating oil use declined even

TABLE 27
Energy Sales and Customers in Michigan, 1980 and 1981[1]
(Millions)[2]

	1980	1981[3]	Percent Change
ELECTRIC COMPANIES			
Electric Power Sales (Kilowatt-hours)	59,754	59,844	0.2
Generating Capacity (Kilowatts)	15.5	14.8	-4.5
Net Plant Investment	$ 9,268	$ 10,471	13.0
Customers (Thousands)	3,090	3,108	0.6
GAS COMPANIES			
Gas Energy Sales (Cubic feet)	767,614	791,477	3.1
Estimated Reserves (Cubic feet)	1,650,000	1,575,000	-4.5
Net Plant Investment	$ 1,716	$ 1,743	1.6
Customers (Thousands)	2,195	2,230	1.6

[1]These figures are based on Michigan's two largest electric providers (Consumers Power Company and the Detroit Edison Company), and the state's two largest gas service providers (Michigan Consolidated Gas Company and Consumers Power Company). These companies account for approximately 92 percent of the total electric service, and about 90 percent of the total gas service.

[2]Unless otherwise indicated.

[3]Estimate.

Source: Michigan Department of Commerce, Public Service Commission.

though temperatures were colder than normal in 1981. The decline in home-heating oil use stemmed from increased conservation as the cost of fuel oil rose and from a large number of homes converting from fuel oil to natural gas. Diesel fuel use, which averaged 26 million gallons a month in 1980, averaged only 23 million gallons a month in 1981, due to the continued depressed state of the economy.

In January, 1981, the cost of number 2 home-heating oil in Michigan was $1.11 per gallon. By March, with decontrol, the cost rose to $1.28. Reductions in demand, the high cost of maintaining inventories, and shifts to natural gas caused a significant drop in price over the

remainder of the year. By January, 1982, the average cost of fuel oil dropped to $1.22 per gallon. The total increase in 1981 for home-heating oil was 10.4¢ per gallon.

Natural Gas

Cubic feet sales of natural gas increased only moderately in 1981 as the weak economy slowed consumption demand. Space heaters continued to shift from oil to natural gas; however, industrial users began shifting to number 6 fuel oil as gas prices continued to increase. Natural gas supplies remained abundant throughout 1981 because of successful conservation efforts and Michigan's large storage capabilities.

TABLE 28
Regulated Public Utility Revenues, 1980 and 1981[1]
(Thousands)

	1980	1981[1]	Percent Change
ELECTRIC REVENUES			
Residential Sales	$1,018,543	$1,106,751	8.7
Commercial Sales	715,590	803,096	12.2
Industrial Sales	1,100,802	1,267,627	15.2
Other Sales (Including Resale)	241,969	282,641	16.8
Total	$3,076,904	$3,460,115	12.5
GAS REVENUES			
Residential Sales	$1,108,547	$1,273,881	14.9
Commercial Sales	534,257	593,601	11.1
Industrial Sales	581,363	655,629	12.8
Other Sales (Including (Resale)	158,064	413,608	161.7
Total	$2,382,231	$2,936,719	23.3

[1]These figures are based on Michigan's two largest electric providers (Consumers Power Company and the Detroit Edison Company), and the State's two largest gas service providers (Michigan Consolidated Gas Company and Consumers Power Company). These companies account for approximately 92 percent of the total electric service, and about 90 percent of the total gas service.

[2]Estimate.

Source: Michigan Department of Commerce, Public Service Commission.

Based on an annual consumption rate of 165 million cubic feet, the average Michigan Consolidated Gas Company customer's bill increased $89 to $715 in December, 1981. Higher gas costs increased Consumers Power Company's average residential bill for the same period by $161 to $682. Total gas utility revenues increased about 22 percent due to higher supply costs which were passed on to customers.

1982 Outlook

With OPEC's agreement to retain its existing price structure through 1982, the price of petroleum products should remain relatively stable. The continual reduction in demand and reduced level of economic activity means that supplies of petroleum for 1982, barring unforeseen disruptions in the Middle East, should remain adequate. According to projections for 1982, imports of crude oil will be required to meet approximately 38 percent of U.S. domestic needs at a cost of $78.5 billion.

Gasoline consumption should remain below 1981 levels under all but the most optimistic economic conditions. Should the economy improve, vehicle miles traveled will increase, but fleet miles per gallon will increase faster as more new cars will be purchased under such conditions. The increase in overall miles per gallon will then offset the increase in vehicle miles traveled, thus holding down demand. Michigan residents are expected to consume 3.67 billion gallons of gasoline in 1982, slightly below the 1981 levels. This assumes no significant change in price. Unleaded gasoline and gasohol will continue to comprise an increasing share of total sales. Refineries in the Midwest operated at between 63 and 67 percent of capacity during 1981, and crude oil stocks remained high. This outlook suggests that a sudden increase in gasoline demand could be met. With depressed demand continuing into 1982, supplies should remain ample to meet the state's needs.

Natural gas and electricity supplies are expected to be significantly above demand for 1982; although, prices, as measured by the U.S. consumer price index, are forecast to increase about 15 percent in 1982.

1981 Developments

The following quote from a Federal Reserve Board (Fed) report to Congress provides a good insight into the course of monetary policy in 1981 and the problems faced by the Fed.

> The only effective way to bring down interest rates and restore financial stability is through the sustained pursuit of anti-inflation policies. . . . Disciplined money policy is an essential element in the effort to dampen inflationary forces. Progress in this direction will be speeded and the near-term hardship minimized if other government policies complement the efforts of the monetary authority. . . The stance of fiscal policy is of particular importance. Assurance that growth in federal expenditures will be limited and that the budget will move toward balance will reinforce the effectiveness of monetary restraint and help relieve pressures on financial markets.*

Despite considerable pressures to ease the restrictions on money supply growth because of the adverse impact of high interest rates on certain sectors of the economy, particularly automobiles, housing, and savings and loans, the Fed maintained a strong anti-inflation stance in 1981. The growth in the money supply (M1-B) was tightly controlled during the year, although the Fed eased restraints somewhat in the last few months of 1981. Adjusted for the shifting of funds to NOW accounts, the money supply grew little in the first three quarters of the year. As a result, the increase in the money supply in 1981 was slightly over 6 percent, the smallest increase since 1975, a recession year. If an adjustment is made for NOW accounts, the increase is much smaller. The money supply increased 6.4 percent in 1980 and increased at a compounded annual rate of 7.3 percent from 1975 to 1980. It is more than a coincidence that the GNP price deflator increased at an annual rate of 7.1 percent during the same period.

The Fed's shift from tenacious restriction in April through June to less restriction in the summer to more accommodation in the latter months of the year did not represent a departure from the Federal Reserve Board's resolve to gradually reduce the rate of monetary

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**Federal Reserve Bulletin*, Federal Reserve System, Board of Governors, August, 1981, page 596.

growth over an extended period of time. Rather, it reflected mid-course corrections that invariably have to occur in an environment of erratic month-to-moth money growth and changing economic conditions.

Interest rates continued unstable in 1981, but the swings were not as wild as in 1980. The federal funds rate peaked at 20 percent in January and then slid all the way to 13.5 percent in March. This key interest rate then rebounded to nearly 20 percent in July, reflecting investor concern about inflation, uncertainty about the President's economic program, and the heavy long-term credit demands of both private and public borrowers. The funds rate declined steadily from mid-July to mid-December, reaching a low of 12 percent as economic activity weakened and monetary policy eased slightly. The rate turned up slightly in the last two weeks of December amid renewed concern about the impact of the large federal deficit on inflation and the credit markets. This was the same pattern followed by most short-term interest rates, although the swings were not quite as pronounced. Long-term rates generally inched upward all year, before turning down in October and then rebounding slightly in December.

The Fed did not receive much assistance from fiscal policy in 1981, although the federal deficit was declining slightly prior to the beginning of the tax cut program. The President's original plan was to make the job of the monetary authority easier by reducing federal spending and balancing the budget by 1984. It became apparent by late summer that this was unlikely to occur and that, in fact, the country was facing the largest budget deficits in history. The Fed's concern about the direction of fiscal policy as expressed in the quote at the beginning of this section has become even more acute. Unless there is a major change in the direction of fiscal policy, the Fed's efforts to tightly control money growth and bring down inflation and interest rates will meet with more difficulty in the next few years and in fact could be thwarted by the heavy demands placed on the credit markets by the federal government. A conflict between monetary policy and fiscal policy is not likely to be a problem as long as the economy remains weak, but a resurgence of economic growth in the latter half of 1982 could cause renewed economic problems. However, the pressure placed on credit markets by heavy public and private demand could be relieved somewhat by the business tax cuts and the savings incentives included in the Economic Recovery Tax Act of 1981. These measures will increase the supply of loanable funds and reduce the borrowing needs of the private sector.

Monetary Policy

The Federal Reserve Board followed a much more even-handed monetary policy in 1981 than in 1980 and most previous years. The Fed kept a tight rein on money growth and followed its new policy (adopted in 1979) of controlling money supply growth rather than attempting to control the level of interest rates. The result has been

record-high interest rates and a weakening economy, but the Fed's goal of controlling inflation appears to be achievable.

The money supply (M1-B) increased at an annual rate of 9.8 percent in the first quarter of the year; however, if an adjustment is made for the impact of NOW accounts there was actually very little growth. This represented considerable moderation from the increase of 10.5 percent, at an annual rate, in the money supply in the second half of 1981. This slowdown occurred despite increased economic activity and continued rapid inflation. (See Table 29.)

The money supply increased at only a 2.8 percent annual rate in both the second and third quarters of 1981. The Fed exercised particularly tight control in the April to June period amid renewed concerns about inflation, and the money supply actually contracted at an annual rate of 4.5 percent.

Monetary policy eased slightly after June as the economy weakened and the inflation numbers began to look better. The Fed was also able

TABLE 29
U.S. Money Stock, 1980 and 1981
(Quarterly Percent Changes at Annual Rates, Seasonally Adjusted)[1]

1980	M1-A	M1-B	Monetary Base
I	3.4	4.6	7.8
II	-2.2	-0.1	5.6
III	13.5	17.1	1.5
IV	1.3	3.7	0.7
Average	4.0	6.4	4.0
1981			
I	-22.6	9.8	3.5
II	-4.3	2.8	6.2
III	-2.1	2.8	2.2
IV	4.2	8.8	5.6[2]
Average	-6.2	6.2	3.8[2]

[1] Percent changes calculated from end of period to end of period.

[2] Estimate.

Source: *Federal Reserve Bulletin*, Federal Reserve System, Board of Governors, selected issues, 1981; Economic Indicators, Council of Economic Advisors, December, 1981.

to ease restraints because the increase in the money supply was near the lower end of the growth targets established for 1981.

The Fed adopted an even more accomodating monetary policy in the last quarter of 1981 as it became evident that economic activity was weakening even more than had been forecast. The drop in the money supply in September also gave the Fed more room to expand reserves to the banking system. In addition, the surcharge on the discount rate was reduced one percent in late September and an additional one percent in October and the basic discount rate was reduced in two steps from 14 percent to 12 percent in November and December. As a result of this easing and the weak economy, interest rates fell sharply; the Federal funds rate dropped almost 7 percentage points and the three-month Treasury bill rate fell from nearly 16 percent in July to about 10.3 percent in late November. The increase in the money supply in the fourth quarter of 1981 was at an annual rate of 8.8 percent.

The Fed was able, for the most part, to comply with the money growth targets set in July for the December, 1980 to December, 1981 period, although the reported data is distorted by the transfer of funds to NOW accounts, which are included in M1-B but are not included in M1-A. As a result, M1-A actually declined sharply and the other money supply measures, M1-B, M2 and M3 were inflated. The targets and the actual growth rates, unadjusted, are presented in Table 30.

TABLE 30
Comparison of 1981 Money Stock Growth Targets With Actual Money Stock Growth[1]
(Percent Change from December, 1980 to December, 1981)

	M1-A	M1-B	M2	M3
Target	3.0-5.5	3.5-6.0	8.0-9.0	6.5-9.5
Actual	-6.2	6.2	10.3	11.3

[1]Targets set by Federal Open Market Committee at July meeting.

Source: *Federal Reserve Bulletin*, Federal Reserve System, Board of Governors, selected issues, 1981.

Interest Rates

Short-term interest rates were more stable in 1981 than in 1979 or 1980. The quarterly averages for most short-term rates showed little

TABLE 31
Market Interest Rates, 1980 and 1981
(Percent)

	3-Month Treasury Bills	High-Grade Municipal Bonds	Corporate Aaa Bonds (Moody's)	Prime Comm. Paper 6 Months	New Home Mortgage Yields
1980					
I	13.46	8.11	9.29	10.10	12.14
II	10.05	7.79	9.39	9.85	13.12
III	9.24	8.55	9.29	10.60	12.36
IV	13.71	9.58	10.54	13.10	12.98
Average	11.51	8.51	9.63	10.91	12.65
1981					
I	14.37	9.93	13.16	14.52	13.61
II	14.83	10.61	13.98	15.35	14.31
III	15.09	12.01	14.92	16.21	15.09
IV	12.02	12.38	14.62	12.94	15.97
Average	14.08	11.23	14.17	14.76	14.75

Source: *Economic Indicators*, Council of Economic Advisors, December, 1981. *U.S. Financial Data*, Federal Reserve Bank of St. Louis, selected issues.

change throughout the year; however, these averages masked some wide swings in rates. (See Table 31.) The pattern for 3-month Treasury bill rates is indicative of the pattern for most short-term rates. The three-month bill rate rose steadily throughout the second half of 1980, peaking at 16.75 percent in early December. As 1981 began, the bill rate was about 14.5 percent. The rate fell to 13 percent in March. The first quarter decline in short-term interest rates was due, partly, to weakness in business loan demand. (See Table 32.) Bill rates turned up in late March and increased to almost 17 percent in May, due, in part, to renewed investor concern about inflation and uncertainty about the President's economic policies. The bill rate dipped to about 14.5 percent in June and then rose to 15.75 percent in late August before beginning a sharp three-month decline. Three-month bill rates reached a low for the year of 10.23 percent during the week of November 27, the lowest level since September, 1980. This sharp decline was due mainly to the weakening economy and an improved inflation outlook. In the last month of 1981, three-month bill rates turned up again, finishing the year at about 11.25

percent as investors became increasingly concerned about the large federal deficit. The increase was also due to a surge in business loan demand and acceleration in the growth rate of the money supply. The commercial paper rate, which exceeded 20 percent in late 1980 and 18.5 percent in May, fell as low as 11 percent in November before rising to about 12.75 percent by year end. (See Table 31.)

TABLE 32
Business Loans at Commercial Banks, 1980 and 1981
(Quarterly Percentage Changes at Annual Rates, Seasonally Adjusted)[1]

Quarter	1980	1981
I	16.9	7.1
II	-9.8	11.5
III	14.4	20.6
IV	21.5	9.3
Average	11.6	12.7

[1]Percentage changes calculated between last months of quarter.

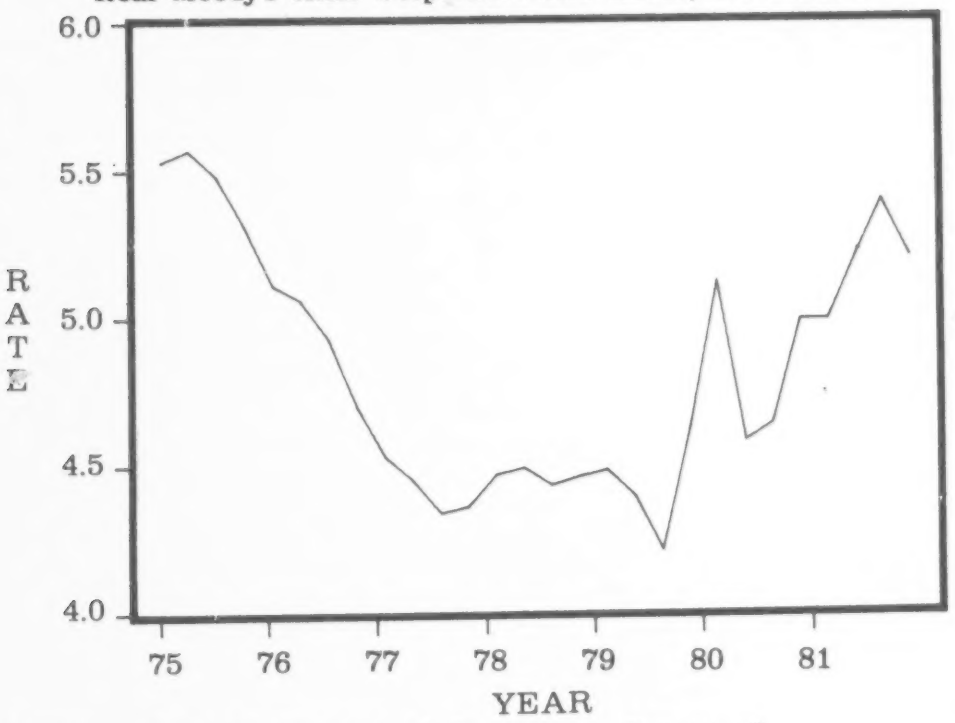
Source: *Economic Indicators*, Council of Economic Advisors, December, 1981.

The discount rate was increased once and reduced twice in 1981, beginning the year at 13 percent, rising to 14 percent in May, and ending the year at 12 percent. The prime bank loan rate was raised and lowered numerous times during the year. The rate peaked at 21.5 percent in early January and ended the year at 15.75 percent.

The long-term interest rate pattern was about the same as for short-term rates in the last half of the year, but there were some differences in the first half of the year. Triple-A corporate bond rates were stable at about 13 percent until late March. These rates then rose to about 14.5 percent in May, dipped slightly in June, and rose to almost 16 percent in early October. Then, as the economy weakened and inflation abated, corporate bond rates dropped to a low of just under 14 percent, before firming slightly in December and ending the year at about 14.25 percent. Municipal bond rates followed the same pattern, beginning the year at 9.75 percent and ending the year at 13 percent, only slightly below the September peak.

Mortgage rates on new homes increased steadily throughout 1981, rising from about 13.25 percent in January to more than 15.5 percent by year-end; these figures understate the actual level of mortgage rates as they lag commitments by two or three months. These high rates almost completely choked off lending activity in the housing

CHART 3
Real Moody's AAA Corporate Bond Rates, 1975-1981



Source: U.S. Department of Commerce, Bureau of Economic Analysis.

market. There were, however, signs at year end that mortgage rates were beginning to ease due to the weakened economy and improved inflation outlook. After peaking at 18.6 percent on October 5, the average rate recorded in the Federal Home Loan Mortgage survey was down to 16.9 percent in early December. In Michigan, mortgage rates were almost 16 percent in January, peaked at about 18.5 percent in October and ended 1981 at about 17.6 percent.

Savings Flows

The growth in time and savings deposits at U.S. financial institutions slowed sharply in 1981, increasing only 5.4 percent above the year-ago level, compared with a 9.2 percent increase in 1980. This sharp decline in the growth rate was due largely to the resurgent growth in the popularity of money-market funds and a reduction in the saving rate. Personal income increased at about the same rate in 1981 as in 1980, although real disposable income actually grew faster in 1981.

Regular savings deposits declined for the fourth consecutive year in 1981 as yields on competing investments continued to be much higher. Deposits fell almost 15 percent in 1981 and have declined almost a third since the 1977 peak. (See Table 33.) Certificates of deposit

(large denomination time deposits) increased at a fast pace for the fifth consecutive year. The 1981 increase was about 16 percent compared with a 16.9 percent increase in 1980. However, the growth rate slowed sharply in the last half of 1981 as interest rates on 90-day certificates of deposit fell from about 18 percent in mid-summer to a low of 11.5 percent in November.

TABLE 33
U.S. Financial Deposits, 1980 and 1981
(Quarterly Percent Changes at Seasonally Adjusted Annual Rates)[1]

	Savings Deposits	Small Denomination Time Deposits[2]	Large Denomination Time Deposits	Money-Market Mutual Fund Shares
1980				
I	-22.7	18.0	19.2	158.7
II	-8.8	17.6	-1.6	87.3
III	28.6	0.3	-3.2	21.6
IV	-14.6	21.6	40.1	-12.4
Average	-5.6	15.9	16.9	73.9
1981				
I	-25.1	17.2	22.1	157.2
II	-15.5	9.3	24.0	65.2
III	-22.0	11.4	17.6	111.4
IV	0.4	9.4	-2.7	70.0
Average	-14.8	12.3	16.0	143.4

[1] Percentage changes calculated between last month of quarter.

[2] Deposits issued in amounts of less than $100,000.

Source: *Economic Indicators*, Council of Economic Advisors, selected issues, 1981.

A substantial amount of funds that would normally have been invested in time and savings deposits were placed in money-market funds. Deposits in these funds more than doubled in 1981, an increase of about $100 billion. Money-market fund deposits increased almost 74 percent in 1980, although deposits actually declined in the second half of the year in response to the sharp drop in short-term rates in the

TABLE 34
Michigan Institutional Savings Market, 1975-1981
(Billions)

	1975	1976	1977	1978	1979	1980	1981
Commercial Banks[1]	$20.0	$21.9	$24.1	$26.6	$29.1	$31.0	$33.8
Savings and Loan Associations	8.6	10.2	11.8	13.2	14.4	15.9	16.0
Credit Unions	2.3	2.4	2.8	3.2	3.5	3.6	3.8
TOTAL	$30.9	$34.5	$38.7	$43.0	$47.0	$50.5	$53.6

[1]Figures are for individual, partnership, and corporate deposits at Federal Reserve Member Banks.

Source: Michigan Credit Union League; Federal Deposit Insurance Corporation; Federal Home Loan Bank of Indianapolis.

April to June period. The sharp rebound in short-term interest rates to all-time highs spurred a sharp resurgence in deposits in these funds that began in January and continued throughout 1981.

Savings deposits at Michigan's institutions also slowed sharply due to the factors discussed above and the continued weakness in real Michigan personal income. Total deposits at Michigan financial institutions increased only 6.1 percent in 1981 compared with a 7.4 percent increase in 1980. Time and savings deposits increased 9 percent above the 1980 level at commercial banks, 0.6 percent at savings and loan associations, and 5.6 percent at credit unions.

1982 Outlook

There is every reason to believe that the Fed will continue to maintain a fairly restrictive monetary policy in 1982; however, their job will be made more difficult by the looming conflict between fiscal and monetary policy. The following quote from Lyle Gramley, a member of the Council of Economic Advisors, frames the issue well.

> It is essential that federal deficits be controlled if strains in financial markets are to be reduced and if the private sectors of the economy are to increase their share of real resources without the often inefficient intervention of special federal credit assistance . . . Our country will achieve the goals of

> reasonably stable prices, lower interest rates, and a more vigorous and prosperous economy much sooner, however, if the Congress and the Administration work together to eliminate the prospects for a very large federal deficit in the years ahead.*

Unfortunately, it is likely that there will be record federal budget deficits in the next few years. The Congressional Budget Office has estimated deficits as high as $165 billion for fiscal 1983 and $215 billion for 1984. Deficits of this magnitude, in an environment of economic growth with relatively slow growth in money, will generate a significant risk of a major rebound in interest rates, which could quickly choke off the expected economic recovery. As a result, the President's decision on the fiscal 1983 budget could be the most important economic event of the year, particularly from the Fed's standpoint.

The Fed's intended policy direction was made clear in a recent address by Paul Volcer, Chairman of the Federal Reserve Board:

> As for the Federal Reserve, I want to assure you that our commitment is firm: we need to persist in the policies of financial discipline that are now in place. . . . The battle against inflation has been fairly joined, and we can see signs of progress. We must carry through until the battle is won.**

The Federal Reserve Board has set a 1982 growth target of 2.5 to 5.5 percent for M1 (this is a new designation for M1-B) and it is probable that this target will be met, although the growth rate is likely to be at the upper end of the range. As long as the economy remains weak, the Fed will be able to keep a tight rein on money growth without the risk of high interest rates, but as economic activity quickens, the competing demands of the private and public sector for credit will bring pressure for a less restrictive monetary policy. Even if the economy remains weak, the Fed could be pressured to ease monetary policy because of concern about rising unemployment.

The outlook for interest rates is encouraging for the first half of 1982. Inflation has moderated considerably and private credit demands are likely to be modest during the first half of the year. Nevertheless, as the economy strengthens in the second half of 1982, the large credit demands of the public sector and the increased credit needs of the private sector are likely to cause a rebound in interest rates. In addition, a fall in interest rates will bring forth pent-up demand for funds that will place upward pressure on rates.

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*_Federal Reserve Bulletin_, Federal Reserve System, Board of Governors, November, 1981, pgs. 834 and 835.

**_Tax Review_, Tax Foundation, Inc., November-December, 1981.

The 90-day Treasury bill rate is forecast to drop to 10 to 10.5 percent by spring and then rise to 11 to 12 percent by year end. The discount rate is expected to fall to 11 percent by mid-year and remain at that level for the remainder of 1982. The prime rate will drop to about 14 percent in the spring before rising to 15 to 16 percent by year end.

Long-term interest rates are expected to decline by less than a percentage point in the first half of the year and then rise to near 1981 peaks by the end of the year; however, if inflation continues to moderate, the declines could be more substantial and the risk of a rebound in rates would be minimized.

Triple-A corporate bond rates are projected to fall about 100 basis points in the early months of 1982 and then rise about the same amount in the second half, ending the year at 15 to 16 percent. Conventional 30-year mortgage rates will decline about 0.5 to 1 percentage point in the first half of the year and then retrace most of that decline, ending the year at 15 to 15.5 percent.

The growth rate in U.S. and Michigan time and savings deposits in 1982 is forecast to fall below the 1981 rate as an expected increase in the saving rate will be more than offset by a decline in the growth rate in personal income and the continued rapid growth of money-market funds. Deposits to money-market funds increased by about $100 billion in 1981 and are expected to increase by another $100 billion in 1982; the new IRA accounts are likely to accelerate the growth of this form of investment.

CONSTRUCTION

1981 Developments

High interest rates paralyzed the housing industry in 1981 as housing starts plunged to their lowest level in 35 years. Housing starts nationwide fell to 1.1 million units in 1981, down 16 percent from 1.3 million units in 1980 and the lowest since 1946 when 1.05 million units were begun. High mortgage interest rates, together with high prices for homes, made it impossible for many potential homebuyers to qualify for mortgage financing.

Constant-dollar expenditures for total new construction in the U.S. declined 4.5 percent in 1981. (See Table 35.) Private residential construction expenditures declined 7.6 percent, while a boom in office building and industrial construction offset declines in other categories to produce a slight overall increase in private nonresidential construction. Despite recent growth in government spending, public construction has actually declined in real terms in almost every year since 1968, and 1981 was no exception—public construction declined 11 percent.

TABLE 35
U.S. New Construction Expenditures, 1979-1981
(Billions of 1972 Dollars)

Type of Construction	1979	1980	1981[1]	Percent Change 1980-81
Private	$ 90.5	$ 78.8	$76.8	-2.5
Residential	47.6	38.1	35.2	-7.6
Nonresidential	42.9	40.7	41.6	2.2
Public	24.6	24.6	21.9	-11.0
Total	$115.1	$103.4.	$98.7	-4.5

[1] Estimate.

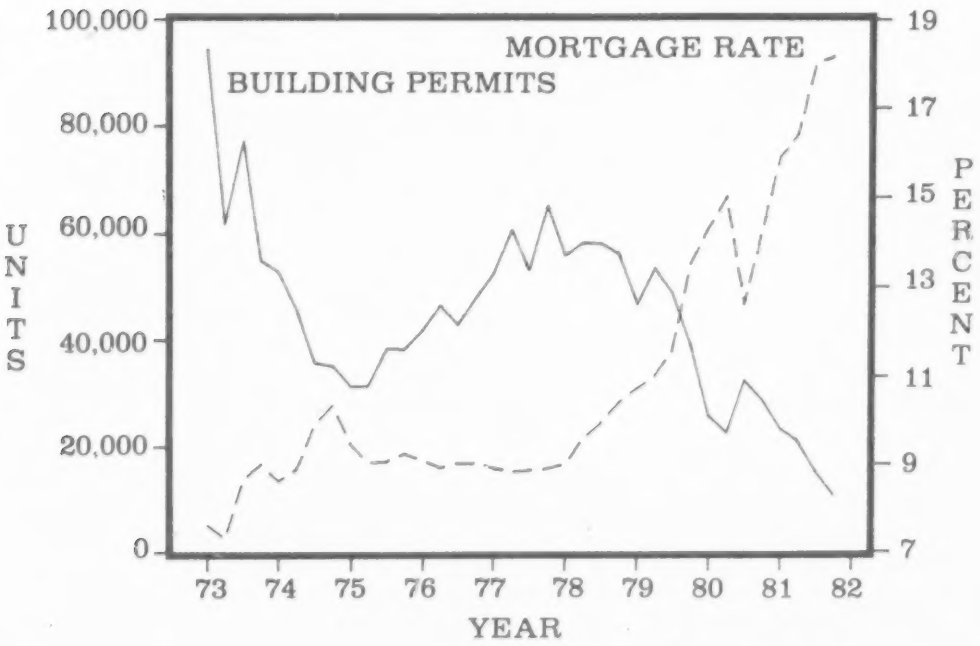
Source: *Construction Review*, U.S. Department of Commerce, Industry and Trade Administration, November, 1981.

The bottom dropped out of the Michigan construction industry in 1981. For the third consecutive year, the number of total residential building permits decreased. Total building permits plummeted to about a quarter of 1973's high of 71,258 units to 18,710 units in 1981. Compared with 1980, building permits fell 37.3 percent. (See Table 36.) Michigan mortgage rates peaked at 18.5 percent in September, averaged 17.1 percent for the year, and combined with high new home prices, an average of $84,000, in the North Central region, to choke off demand for new homes. (See Chart 4.)

In an attempt to aid the faltering home-building industry, the state lent $66 million to home buyers from state retirement funds. The Michigan Home Mortgage Loan program provided funding for more than 1,200 homes sold by 300 builders through 49 participating lending institutions, in a limited effort to stimulate housing construction.

The value of construction awards in Michigan in 1981 totaled $3.3 billion, 20.9 percent below 1980 awards. (See Table 37.) Residential awards declined 25 percent; nonresidential awards fell 32.7 percent; however, public utilities awards increased 23.1 percent.

CHART 4
Michigan Residential Building Permits and Mortgage Rates,
1973-1981



Source: U.S. Department of Commerce, Bureau of the Census and Federal Home Loan Bank of Indianapolis.

TABLE 36
Michigan Residential Building Permits, 1973-1981

Year	Private: Single-Family Units[1]	Private: Multi-Family Units[1]	Public	Total	Percent Change
1973	35,784	35,474	-0-	71,258	-7.0
1974	26,481	17,710	100	44,291	-37.8
1975	26,653	10,121	116	36,890	-16.7
1976	32,331	13,564	-0-	45,895	24.4
1977	41,314	17,370	-0-	58,684	27.9
1978	43,387	17,687	-0-	61,074	4.1
1979	33,959	15,298	48	49,305	-19.3
1980	17,870	11,106	852	29,828	-39.5
1981[2]	11,624	6,739	347	18,710	-37.3

[1]A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone.

[2]Preliminary.

Source: *Construction Review*, U.S. Department of Commerce, Industry and Trade Administration, November, 1981.

The continuing depression in the construction industry threw another 7,900 workers out of work, bringing total contract construction employment to 109,200, a decline of 6.7 percent. Real average weekly earnings continued their nine-year decline and fell to $181.01 in 1981 from the 1972 peak of $230.09.

1982 Outlook

If, as expected, interest rates come down and the federal tax cuts succeed in stimulating an economic recovery and channeling additional funds to mortgage markets, the construction industry will recover modestly in 1982. Total construction expenditures, in constant dollars, will expand only marginally, about one percent. Private residential construction will increase by about 5 percent and private nonresidential construction will increase by 2 percent. The office-building boom will peak in 1982, and public construction will fall by 6 percent. New housing starts will increase slightly to 1.2 million units—further recovery will be hampered by continuing high mortgage interest rates. Recent business tax changes will stimulate a mild

TABLE 37
Michigan Construction Contract Awards, 1961-1981
(Thousands)

Year	Non-residential	Residential	Total Building	Public Works and Utilities	Total Construction
1961	$ 476,406	$ 499,822	$ 976,228	$ 325,264	$1,301,492
1962	465,567	541,802	1,007,369	346,143	1,353,512
1963	558,207	658,930	1,217,137	267,038	1,484,175
1964	788,533	741,977	1,530,510	317,401	1,847,911
1965	766,258	1,038,356	1,804,614	465,073	2,269,687
1966	930,000	835,030	1,765,030	333,200	2,098,230
1967	946,513	1,020,000	1,966,513	357,000	2,323,513
1968	912,849	1,029,581	1,942,430	407,537	2,349,967
1969	962,697	891,531	1,854,228	874,715	2,728,943
1970	955,592	942,760	1,898,352	1,052,245	2,950,597
1971	874,058	1,319,978	2,194,036	840,719	3,034,755
1972	1,010,891	1,596,633	2,607,524	842,780	3,450,304
1973	1,206,481	1,856,354	3,062,835	1,299,276	4,362,111
1974	1,355,623	1,314,147	2,669,770	791,628	3,461,398
1975	951,139	1,089,145	2,040,284	1,146,796	3,187,080
1976	1,111,835	1,481,164	2,592,999	592,738	3,185,737
1977	1,525,733	2,144,489	3,670,222	604,463	4,274,685
1978	1,752,267	2,469,130	4,221,397	1,821,304	6,042,701
1979	1,975,434	2,392,063	4,367,497	889,324	5,256,821
1980	1,970,299	1,535,367	3,505,666	667,944	4,173,610
1981	1,326,730	1,152,023	2,478,753	822,348	3,301,101

Source: F. W. Dodge Division of McGraw-Hill Information Systems Company, special release.

recovery in nonresidential construction in 1982, but full expansion will take time. Public construction will continue its downward trend because of federal budget cuts, high interest rates in the tax-exempt bond market, and generally weak government finances.

The Michigan construction industry will remain stagnant in 1982. Building permits are expected to increase to only 20,000 units. Construction employment will decrease from 109,200 to 101,800 in 1982 and wage and salary payments will remain constant at $2.4 billion.

AGRICULTURE

1981 Developments

Gross income of farmers advanced in 1981 by an estimated 7.9 percent with the value of both crop and livestock products rising. (See Table 38.) Crop values increased faster than livestock values, and crops made up 59.5 percent of the value of total farm marketings, up from 58.5 percent in 1980. Strong gains in field crop production caused most of the increase in gross farm income, as farm prices generally stabilized by year end and some prices declined.

Nationally and in Michigan 1981 was a generally good year for farm production. The drought and heat that retarded 1980 farm production at the national level was much less severe last year. At both the national and state levels the corn crop set records. The 274 million bushel corn crop in Michigan surpassed the previous year's record crop by 11 percent. This reflected record yields per acre as well as greater acreage planted. Winter wheat production of 41.5 million bushels was the best crop since 1953 and set a record of 50 bushels per acre. Despite increased acreage, soybean production declined in Michigan. Excessive rainfall damaged dry bean production. Sugar beet production set a new state record of over 2 million tons. Production of most Michigan feed grains increased in 1981.

A mild March followed by an April freeze damaged Michigan's fruit crops, causing a 24 percent drop in production. Hardest hit were tart cherries and apples, Michigan's two most valuable fruit crops; however, declines in these important crops and in sweet cherries, peaches, and pears were partially offset by increases in blueberries and grapes. Blueberry production set a new record in Michigan, up 27 percent.

The year was characterized by sharp drops in the number of hogs and feeder cattle with Michigan production dropping more than the national average. Milk cow numbers and milk production increased slightly during the year in Michigan, as occurred nationally.

While production of most farm commodities was strong during the past year, prices weakened under the pressure of large harvests. The weak economy also contributed to price declines, especially for red meat. Corn illustrated the price situation most dramatically. Corn prices declined rapidly just as the new crop was becoming available and fell below last year's prices by year end. (See Table 39.) Winter wheat prices recovered somewhat after declining during the beginning of the year because of foreign purchases. Nevertheless, wheat prices closed the year slightly below average prices of the previous year. Soybeans also declined in price because of the larger national crop.

Dry beans rose in price because of crop damage already mentioned. Potato prices averaged higher for the year but were below last year's average by year end. Prices rose for Michigan fruit, sufficiently to offset crop damage.

Hog prices averaged above the previous year but closed the year lower. Beef prices also fell, reflecting good meat supplies and a weak economy.

TABLE 38
Michigan Cash Receipts from Farm Marketing, 1980 and 1981
(Millions)

	Livestock and Products		Crops		Total	
Period	1980	1981[1]	1980	1981[1]	1980	1981[1]
Jan.	$ 96.7	$ 107.6	$ 69.1	$ 96.1	$ 165.7	$ 203.7
Feb.	93.8	96.9	74.9	94.0	168.8	190.9
Mar.	90.6	100.9	84.1	108.9	174.7	209.9
April	82.2	90.8	67.4	84.8	149.6	175.5
May	86.3	95.7	78.8	96.2	165.1	191.9
June	87.4	97.7	106.0	119.2	193.5	216.9
July	90.7	101.5	128.6	132.5	219.3	234.0
Aug.	98.5	98.6	166.7	183.7	265.1	282.3
Sept.	95.7	96.4	172.1	204.4	267.8	300.8
Oct.	112.5	108.1	199.4	188.5	311.9	296.7
Nov.	87.0	87.0	236.4	235.9	323.4	322.9
Dec.	97.5	96.0[2]	191.1	185.0[2]	288.6	281.0[2]
Total	$1,118.8	$1,177.2	$1,574.7	$1,729.2	$2,693.6	$2,906.5

[1] Preliminary.

[2] Estimate.

Source: U.S. Department of Agriculture.

With agricultural prices generally softening and high interest rates and fuel prices, net farm income was reduced. During 1981, prices received by Michigan farmers advanced an estimated 5.8 percent while prices paid nationally advanced an estimated 8.2 percent. The changes reflected sharp upward movement early in the year with indexes virtually flat after mid-year. Net income declined an estimated 6 percent in 1981 because of these price pressures.

TABLE 39
Prices Received by Michigan Farmers, 1981

Month	Corn Per Bu.	Wheat Per Bu.	Oats Per Bu.	Dry Beans Per Cwt.	Soybeans Per Bu.	Potatoes Per Cwt.	Baled Hay Per Ton
January	$3.19	$4.00	$2.23	$24.80	$7.23	$9.40	$38.50
February	3.20	3.58	2.24	26.10	6.94	11.10	40.50
March	3.14	3.24	2.30	28.80	7.34	11.30	38.50
April	3.18	3.07	2.28	30.60	7.26	11.30	38.50
May	3.14	2.94	2.24	38.80	7.20	12.20	40.00
June	2.99	2.96	2.23	40.20	6.90	12.20	35.00
July	3.15	3.42	1.86	37.10	6.97	10.00	33.00
August	2.84	3.49	1.82	25.00	6.51	7.80	47.50
September	2.58	3.60	1.80	24.40	6.24	6.80	53.00
October	2.42	3.70	1.85	28.60	6.05	6.20	46.00
November	2.28	3.78	2.10	27.50	5.97	6.70	61.00
December[1]	2.16	3.70	2.10	29.10	5.85[2]	5.70	61.00
Marketing Year Average	$2.86	$3.46	$2.09	$30.08	$6.71	$9.23	$44.38

Month	Hogs Per Cwt.	Beef Cattle Per Cwt.	Calves Per Cwt.	Lambs Per Cwt.	Wholesale Milk Per Cwt.	Eggs Per Doz.	Wool Per Pound	Turkeys Per Pound
January	$41.30	$50.80	$65.00	$53.40	$14.20	$ .58	$ .70	$ .45
February	41.80	50.50	66.40	52.00	14.10	.52	.75	.40
March	38.50	49.80	70.60	54.80	14.10	.50	.70	.40
April	39.00	52.80	72.90	61.40	13.90	.55	.65	.40
May	42.20	52.60	70.80	62.50	13.70	.50	.65	.45
June	45.30	53.00	75.50	64.40	13.50	.50	.65	.45
July	50.30	51.50	70.00	57.30	13.40	.52	.65	.46
August	48.20	50.80	67.00	50.90	13.40	.50	.65	.45
September	48.00	48.60	64.00	46.30	13.70	.53	.65	.40
October	44.10	46.30	61.00	46.30	14.10	.56	.63	.34
November	42.40	45.50	52.00	42.70	14.00	.64	.63	.37
December[1]	38.80	43.90[2]	49.30	39.70	14.10[2]	.57	.55	.38
Calendar Year Average	$43.28	$49.68	$65.38	$52.64	$13.85	$ .54	$ .66	$ .41

[1]December 15th price.

[2]Data for whole month.

Source: *Agriculture Across Michigan*, U.S. Department of Agriculture and Michigan Department of Agriculture, Michigan Agricultural Reporting Service, selected issues.

An encouraging sign is that neither the number of farms nor the amount of farmland declined in 1981. The number of farms rose by about 1,000 to 67,000 while farm land increased by 100,000 acres.

1982 Outlook

Nationally the losses suffered by cattle feeders have led to a reduction in beef feeder cattle. Hog numbers are also down reflecting the generally lower prices and higher feeding costs of the last two years. The price pressure on red meat, particularly beef, results from the decline in real personal income and competition with less expensive meats such as chicken. The profitability of poultry producers is also being affected by the low prices for chicken and turkeys. This poor profit picture for livestock producers and the resulting drop in meat supply will bring about some increase in meat prices. This increase will be further aided by rising real income; however, adequate supplies and declining prices for feed grains will restrain any price rise by allowing increased profit margins and encouraging more meat production, as overall cattle numbers were still increasing early in 1982.

Milk will also not increase as rapidly in price because of lower feed costs and, more importantly, nearly flat price supports.

Crop prices probably will stabilize in 1982 since some of the weakness reflected concern of a grain embargo arising from the Polish situation. This fear may continue to overhang the market to some extent. A factor discouraging sales to the Soviet Union is the expiration of the 5-year grain sale agreement because of the Polish situation. Most of the rest of Eastern Europe is short of foreign exchange. Other threats to trade include possible trade disputes arising in automobiles and steel, primarily with market economies, such as Japan. Foreign markets have become very important to maintaining U.S. and Michigan grain crop prices. Prices for processed vegetables and fruit may show some increase as national production of several types of fruits and vegetables were down in 1981.

Overall, farm prices will be relatively flat during much of 1982. There will be little improvement in profits, as farm costs will continue to rise, although at slower rates than in recent years. However, flat oil and gasoline prices plus slight declines in interest rates should prevent deterioration in farm income. A possible problem area is the portion of agriculture that is heavily in debt. These farmers may have increasing difficulty financing operations as their farmland advances little in value while they still have historically high interest costs.

Food prices will advance at an estimated 7 percent with most of this attributable to higher marketing and distribution costs. Meat prices may advance late in the year, especially if the economy recovers as expected. Some fruit and vegetable prices will also advance but their effect on the CPI will not be large.

MINERAL SUPPLIES AND MINING

1981 Developments

During 1981, mineral supplies were generally adequate and, in some cases, excessive. Supplies of steel for oil-well drilling equipment and zinc were the only minerals in short supply. Even worldwide oil surpluses developed during most of the year. These supply buildups were caused primarily by weak market demand engendered by the poor economy.

The weak demand for many minerals and mineral products had the effect of lowering prices for some of these items, although cost pressures raised some prices. Overall, the value of mineral production rose an estimated 6.4 percent to $2.8 billion in 1981. (See Table 40.) This increase was largely due to a 28 percent increase in the value of oil production, as the final stages of the decontrol of oil prices caused a sharp rise in the price of oil.

The rise in the value of mineral production occurred despite a decline in production levels for most mineral products. Estimated 1981 production declined in 11 of the 15 mineral categories measured by the Bureau of Mines. This marked the second consecutive year that production has fallen in most of the mineral categories. Declines in oil and natural gas production reflected both fewer new discoveries and difficulties in producing existing discoveries. Almost all of the other declines occurred in reaction to weak markets and accumulating inventories. The most serious declines occurred in iron ore production, down 1.4 million long tons, and in portland cement production, down nearly 0.8 million short tons. Crushed stone also declined by 3.5 million short tons. Deterioration in the construction and transportation equipment industries were the major causes of these declines.

Overall, metal and metal product prices advanced by less than 5 percent in 1981. Despite production declines, iron-ore prices rose, reflecting some strength in the demand for steel and upward cost pressures caused by the rebound in auto production in the first half of 1981 and from the rising demand of oil-well drilling equipment. The prices for most other metallic minerals fell in 1981. Copper, aluminum, lead, nickel, tin, and platinum were all well below 1980 average prices by December, 1981, as severe excess supplies existed for many of these minerals. The prices for cement and stone, two major nonmetallic minerals produced in Michigan, rose moderately, even though production declined in response to lower demands.

1982 Outlook

Fuel production for three major fuels, oil, natural gas, and coal, may increase in 1982. New discoveries of oil and natural gas have a reasonable chance of offsetting production declines. A possible resumption of open-pit mining in Bay, Ingham, and Jackson counties would result in renewed coal production in Michigan. In sharp contrast to the last three years, worldwide oil surpluses will keep oil prices stable in 1982.

Despite the temporary closing of several Michigan iron ore mines during 1981 and reduction of production at the Tilden mine, inventories of iron ore were substantial at the beginning of 1982. These inventory buildups, plus a weak demand for steel, will cause production slowdowns and temporary mine closings again in 1982. Iron-ore production will be adversely affected by overcapacity in the steel industry. The U.S. steel industry has accused producers in Brazil, the European Economic Community, Romania, South Africa, and Spain of dumping, that is, selling below costs. Thus, the market is flooded with cheap imports and the demand for domestic steel, and the iron ore needed to produce it, will be weak. Nevertheless, iron-ore production could recover late in the year as motor vehicle production recovers.

Nonferrous metallic mineral production will increase slightly in 1982 in response to moderate increases in demand. Prices of these minerals are likely to increase by 8 percent. These price increases will stem from increased demand coupled with relatively small inventories. Supply bottlenecks should not develop because the industry has large amounts of excess capacity. Thus, metallic mineral production will not hamper recoveries in the durable goods or defense industries; however, supply problems could occur in future years if the defense buildup is accompanied by a strong economic recovery.

Production of nonmetallic minerals other than fuels will remain below capacity in 1982. Since recovery of the construction industry will be modest, sand, stone, gypsum, and cement will face another year of weak demand, although modest improvement is likely for some categories. Foundry sand, however, is unlikely to ever resume its former high production levels. Basic changes in the auto industry have permanently reduced the need for foundry parts, thus reducing the need for foundry sand. Michigan ceased to be the number one producer of foundry sand in 1980, but the steady decline in use of foundry sand should slow in 1982. A small rise in fuel prices will help offset the general weakness in demand for nonmetallic minerals since their operations are energy- and capital-intensive.

Overall, the value of Michigan mineral production is estimated to rise 4 percent with small production and price increases expected.

TRANSPORTATION

1981 Developments

Revenues for Michigan's transportation systems declined again in 1981 despite a slight increase in vehicle travel. Revenues declined because drivers switched to lighter, more fuel-efficient vehicles and conserved fuel, producing a decline in fuel tax revenues. State revenues, distributed among the state, counties, municipalities, and public transit and rail programs, decreased $55.6 million in fiscal 1981 from fiscal 1980. Proceeds were down $77.9 million from fiscal 1979.

Collections from fuel taxes, license plate fees and other sources produced $682.9 million for the Michigan Transportation Fund in fiscal 1981, down 7.5 percent from the $738.5 million collected the year before. Transportation taxes yielded $760.8 million in fiscal 1979.

In addition, gasoline consumption fell by 6.7 percent from 4.1 billion gallons in fiscal 1980 to 3.8 billion gallons in fiscal 1981. Gasoline consumption has declined every year since peaking in 1978 at 4.6 billion gallons. Hence, over a three year period, the annual consumption rate has fallen by approximately 800 million gallons.

Furthermore, income from vehicle weight taxes decreased 10.9 percent from 1980 to 1981; collections fell $25.7 million to $210.6 million. Correspondingly, vehicle registrations fell for the first time in many years, totaling 6.9 million at the end of fiscal 1981 compared with 7.3 million a year earlier. The total was the lowest since 1976. Some of the decline likely resulted from the conversion of the registration deadline from March 31 to the birthday of the vehicle owner.

The impact of dwindling revenues has been even more severe on counties, all of which have reduced staff and services, deferred equipment purchases and limited construction programs. For example, the Mackinac County Road Commission virtually shut down for several months in the summer and fall and others are expected to do the same in 1982.

On the brighter side, vehicle travel on Michigan's more than 117,000 miles of highways, roads and streets, increased from 61.5 billion miles in calendar 1980 to 62 billion miles in 1981. That reversed a decline that started after mileage reached a record 67.4 billion in 1978.

Aviation

Aviation activity declined in Michigan during 1981. Activity was affected by deregulation, fuel prices and availability, and the state of

TABLE 40
Michigan Mineral Production, 1980 and 1981[1]

Mineral	1980 Quantity	1980 Value (millions)	1980 Percent of Total Value	1981[2] Quantity	1981[2] Value (millions)	1981[2] Percent of Total Value	Percent Change in Value 1980-1981
Metallic							
Copper: recoverable content of ores, etc. (short tons)[3]	36	$ 80.0	3.0	45	$ 79.8	2.8	-0.2
Iron Ore: useable, gross weight (thousand long tons)	16,267	656.0	24.6	14,861	653.7	23.0	-0.4
Total Value Metallic		$ 736.0	27.6		$ 733.5	25.8	-0.3
Nonmetallic							
Fuels[4]							
Natural Gas (million cubic feet)	158,302	$ 372.9	14.0	151,368	$ 440.2	15.5	18.0
Petroleum (thousand 42-gallon barrels)	33,808	728.6	27.3	29,493	932.3	32.8	28.0
Subtotal Value		$1,101.5	41.3		$1,372.5	48.3	24.6
Other Nonmetallics							
Cement							
Masonry (thousand short tons)	205	$ 14.2	0.5	177	$ 13.1	0.5	7.7
Portland (thousand short tons)	4,767	230.5	8.6	3,989	204.1	7.1	-11.5
Clay (thousand short tons)	1,982	7.2	0.3	1,866	11.3	0.4	56.9
Gypsum (thousand short tons)	1,383	8.6	0.3	1,343	8.6	0.3	0.0
Lime (thousand short tons)	836	36.8	1.4	792	36.2	1.3	-1.6
Natural Brines (Bromine, Calcium Chloride, Iodine, and Magnesium)	1,378	235.4	8.8	NA	188.0	6.6	-20.1
Peat (thousand short tons)	253	4.7	0.2	253	5.3	0.2	12.8
Salt (thousand short tons)	2,406	104.8	3.9	2,134	89.4	3.1	-14.7
Sand and Gravel (thousand short tons)	36,598	98.4	3.7	33,300	91.7	3.2	-6.8
Stone							
Dimension (thousand short tons)	7	0.1	0.0	7	0.2	0.0	50.0
Crushed (thousand short tons)	32,148	91.8	3.4	28,600	87.0	3.1	-5.2
Subtotal Value		$ 832.5	31.2		$ 734.9	25.9	-11.7
Total Value Nonmetallic		$1,934.0	72.4		$2,107.4	74.2	9.0
GRAND TOTAL		$2,669.9	100.0		$2,840.9	100.0	6.4

[1] Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

[2] Estimates.

[3] Includes some silver.

[4] Data provided by Michigan Department of Natural Resources.

Source: U.S. Department of Interior, U.S. Bureau of Mines, except mineral fuels as noted; 1981 estimates from Michigan Department of Natural Resources assisted by the U.S. Bureau of Mines.

the economy. An analysis of the four measures of aviation activity reveals that the number of airline passengers, airline cargo, and control tower operations fell sharply, while the number of registered aircraft experienced a small increase. These declines occurred prior to the August, 1981 air traffic controller's strike and subsequent airline service reductions.

Detroit Metropolitan continues to be the busiest Michigan airport, accounting for almost 76 percent of the state's airline passengers. Kent County International Airport in Grand Rapids maintained its share of Michigan airline passengers and served 6 percent of Michigan's air travelers.

Passengers at Michigan's 22 airports providing scheduled airline service decreased from 13.4 million for the 12-month period ended June 30, 1981, compared with 11.7 million for the same period in 1980. Michigan's 13.1 percent reduction is almost double the 7.1 percent decrease nationwide. Despite these decreases, in the past five years, the number of airline passengers in the state increased 14.8 percent.

In addition to the decline in the overall number of passengers, the number of control tower operations decreased 10.9 percent. Airline cargo, highly dependent on the auto industry, also declined, by 28 percent. The number of registered general aviation aircraft in the state increased 2 percent to a record 6,925.

Highways

Opening of the 6.2-mile mid-section of the I-475 (UAW) freeway in September completed the Flint freeway system and brought Michigan's 1,181-mile Interstate system to 95.6 percent completion. It was the only freeway opened in the state in 1981.

Only 51 miles remain to finish the state's portion of the 42,500-mile national Interstate network, including the eight-mile final link of I-69 to run from Charlotte north to Lansing and east to a connection with existing I-69 near Perry in Shiawassee County. Michigan's freeway system now totals 1,728 miles.

Maintenance costs for highways continued upward, but construction costs leveled off, the result of a decline in the rate of inflation and competitive bidding among contractors.

Intercity Passenger Programs

State-supported intercity passenger travel includes railroad and bus programs. During the 1981 fiscal year, approximately 275,000 passengers were carried on state-supported intercity bus projects and about 200,000 passengers traveled aboard state-supported passenger rail services. Also in 1981, construction began on transportation terminals in Alma, Marquette, Pontiac and Battle Creek. A facility was opened in Houghton in February of 1981.

Local Transit Programs

The state continued to support local transit agencies and authorities for purposes of providing public transportation services and facilities. The state's Bus Operating Assistance program funded 45 systems during 1981. Additional systems were funded under the County Incentive and Urban and Rural programs.

In the Detroit region, the state has been instrumental in advancing the Southeastern Michigan Regional Transit expansion program. Final engineering and construction of the Central Automated Transit System (CATS, formerly known as the Downtown People Mover) is scheduled to start in the spring of 1982. Total capital cost of the system is estimated at $127 million and construction is scheduled for completion in 1985.

Preliminary engineering for a high capacity transit system in Detroit's Woodward corridor is also underway. Presently, SEMTA has received state and federal funds of $6.25 million to date.

Rail and Water Freight Programs

During the 1981 fiscal year, the state reduced the total miles of subsidized railroad trackage from 850 to approximately 735 miles through: phase-out of operations on certain line segments; execution of a long-term operating agreement; and successful negotiations with the Consolidated Rail Corporation. The current system provides service to approximately 358 rail users within the state. During fiscal 1981, this system provided service for 51,738 carloads, down approximately 2 percent.

The Water Transportation Program has made significant advances during the year. In April, 1981, the Detroit/Wayne County Port Authority was formed pursuant to Public Act 639 of 1978. This state assistance is provided to enhance the authority's ability to market and manage the port operations in a more efficient and productive manner. In addition, the Water Transportation Program has continued to monitor the construction of an Integrated Tug-Barge.

Ridesharing

The state's ridesharing program continued to promote comprehensive ridesharing services for state employees and for all Michigan residents. Twenty state-sponsored local ridesharing offices provided carpool, vanpool and transit information services to employers and employees throughout Michigan. Major emphasis during 1981 was placed on an expanded statewide vanpool program, known as MichiVan, serving employees who are unable to participate in employer-sponsored programs. At the end of 1981, there were forty MichiVans serving over 500 employees.

The total number of vanpools in Michigan grew to 476. This includes fourteen employer-sponsored programs along with the State Employee Vanpool Program and MichiVan programs. Organized vanpools serve approximately 6,000 Michigan employees and provided 3 million passenger trips during 1981.

1982 Outlook

Revenues for transportation will decline again in 1982 with a continuation of the trend toward lighter, more fuel-efficient automobiles. The Michigan Transportation Fund, whose revenue comes primarily from the fuel and weight taxes, is projected at $668.7 million, down approximately $14 million from fiscal 1981 and $92 million from two years earlier. Coupled with steadily rising costs, the decrease points to a need to revise the tax structure that finances transportation if adequate services are to continue. Fierce competitive bidding among contractors seeking a share of fewer construction projects is expected to hold down building costs, but maintenance costs are likely to climb at least 9 percent.

In 1982, the Michigan Department of Transportation expects to award construction contracts totaling approximately $220 million, up from $215 million in 1981. They will include work on county roads and municipal streets eligible for federal aid, which pays 77 to 90 percent of the cost of such projects. Maintenance will consume a larger share than ever of total spending for highways, roads and streets. An increasingly larger share of state and federal revenues for public transportation and railroads will be spent for maintenance of existing services, leaving less for expansion and for capital projects.

No freeways are scheduled for opening in 1982. Work will continue on U.S.-131 south from Big Rapids, including projects for two bridges across the Muskegon River, and on I-69 north of Lansing and on M-21 between Lapeer and Port Huron.

Before the end of 1982, the intercity bus industry will be deregulated nationally, possibly eliminating vital intercity bus services in many rural and urban areas.

The state will continue to support local transit services during 1982; however, state and federal funding levels will be less than in previous years.

Progress will continue for the Detroit Downtown People Mover. By the end of fiscal 1982, some construction will start and the project will be well underway; however, unless additional funding is forthcoming prior to the completion of the fiscal year, completion of the project will be delayed. Public transportation demonstration projects will continue throughout the fiscal year, utilizing previous years' funds and numerous federal grants.

TOURISM

1981 Developments

In 1981, Michigan tourism improved slightly despite the recession. Total tourist spending reached an estimated $10 billion in 1981, up 9.9 percent from $9.1 billion in 1980. During recessionary times, consumers and businesses usually travel less and this caused tourist activity to fall off after the 1978 peak year. The desire to reduce travel costs, however, actually influenced more travelers to spend their vacations in Michigan last year rather than take expensive out-of-state trips. Even though Michigan tourists, who account for approximately 60 percent of the state's travelers, spend less than out-of-state tourists, total tourist spending increased because of the increase in tourist activity.

A number of tourism indicators illustrate this upward trend. For example, the number of miles driven on Michigan highways increased 2.1 percent from 61.2 to 62.5 billion in 1981. While this growth rate is small, it indicates an improvement from the decline in miles driven in 1980. In addition, the number of tourists visiting travel information centers increased from 1.7 to 1.9 million, or 9.5 percent from 1980 to 1981. Furthermore, the number of Mackinac Bridge crossings increased by 2.7 percent, in 1981, from 2.26 to 2.32 million. (See Table 41.)

Similarly, total state park camping attendance increased from 5.2 million in 1980 to 5.3 million in 1981, or 1.3 percent. Despite this modest gain, total camping attendance has not yet regained the 1978 level of 5.9 million. Nevertheless, the growth of camping attendance in the upper peninsula exceeded the statewide rate, increasing 3 percent in 1981. A growing tourist industry is particularly important to the northern Michigan economy because very little industry is located there.

Efforts to build a strong convention business appear to have paid off, in 1981, since the number of delegates to major conventions increased dramatically. The number of delegates increased from 1.1 million in 1980 to 1.6 million in 1981; however, the temporary closing of a major Grand Rapids hotel in 1980 artifically inflated this increase. After adjusting for this factor, the number of delegates actually grew by 13 percent in 1981.

Even though more delegates traveled to Michigan, they stayed for shorter periods of time. The national average for a convention stay was 3.8 days while Michigan delegates stayed approximately 3 days. Nevertheless, the convention business has become an important part of the Michigan tourist industry.

1982 Outlook

In recent years, the Michigan tourist industry has been identified as an industry with strong growth potential and an industry important to diversifying the state's economy and reducing the state's extreme reliance on the volatile auto industry. This growth potential was tapped by the Republican Convention, and Superbowl XVI. These events focused a national spotlight on Michigan, demonstrating the state's ability to host major events. Beyond the estimated $60 million spent by approximately 70,000 superbowl fans, Michigan should also reap long-term benefits from an improved image. This image, along with promotional campaigns such as "Say, Yes to Michigan," will attract visitors to the state and develop a strong convention and tourist industry in the years to come.

INTERNATIONAL TRADE

1981 Developments

International trade worsened in 1981. As Table 42 indicates, the U.S. current account balance, the broadest measure of U.S. international trade and financial transactions, declined from $3.3 billion in the first quarter of 1981 to $2.1 billion in the third quarter of 1981.

TABLE 42
U.S. International Trade Balance, 1980 and 1981
(Billions)

	Merchandise Balance			
	Exports	Imports	Net Balance	Balance on Current Account
1980				
I	$ 54.9	$ 65.0	$-10.1	$-2.1
II	55.7	62.4	-6.7	-0.5
III	56.3	59.2	-2.9	5.0
IV	57.1	62.7	-5.6	1.4
1981				
I	61.1	65.8	-4.7	3.3
II	60.5	67.4	-6.9	1.1
III	58.0	65.1	-7.1	2.1

Source: *Economic Indicators*, Council of Economic Advisors, November, and December, 1981.

A second indicator of international activity, the U.S. merchandise balance (i.e. exports minus imports), also worsened from a deficit of $4.7 billion in the first quarter of 1981 to $7.1 billion in the third quarter of 1981.

Exports increased to $61.1 billion in the first quarter of 1981, and then dipped in the second and third quarters to $60.5 billion and $58 billion, respectively. Although exports have become an increasingly important segment of the U.S. economy in recent years, the demand for U.S. goods has lessened, in part, because many of the nation's trading partners are also suffering economic downturns. In addition,

TABLE 43
Trade Under the U.S. Automotive Agreement With Canada, 1980 and 1981
(Millions)

	1980			1981[1]		
	U.S. Exports	U.S. Imports	Balance	U.S. Exports	U.S. Imports	Balance
Cars	$ 2,906	$ 3,802	$ -896	$ 3,251	$ 4,118	$ 867
Trucks	1,044	1,893	-849	1,172	2,476	-1,304
Parts	6,478	2,909	3,569	7,665	3,483	4,182
Tires & Tubes	124	196	-72	141	254	-113
TOTAL	$10,552	$ 8,800	$ 1,752	$12,229	$10,331	$ 1,898

[1]Estimates.

Source: U.S. Department of Commerce.

the strength of the U.S. dollar climbed to an 11-year high in the third quarter of 1981, severely affecting the price competitiveness of U.S. goods. As the dollar strengthened, and domestic costs increased, U.S. goods became more expensive to foreign importers.

Imports temporarily increased from $65.8 billion in the first quarter to $67.4 billion in the second quarter of 1981, and then declined to $65.1 billion in the third quarter, reflecting a weaker domestic economy.

While the U.S. dollar remains strong, domestic importers should benefit from lower import price inflation. Nevertheless, the value of the U.S. dollar against foreign currencies is expected to decline, despite high interest rates and a slow-growing money supply.

The Japanese government voluntarily curbed the export of Japanese automobiles to the United States in 1981, due to growing pressures from domestic automakers. Detroit became concerned that the Japanese were capturing too large a share of the U.S. automobile market at a time when domestic auto sales were falling, however, due to declining sales, this import limitation was less effective than expected.

Although Japan ranked second among our nation's trading partners, Canada lead the list with an estimated $41.5 billion in imports and $35.4 billion in exports to the U.S. in 1980. The automobile industry made up a large portion of this trade under the U.S. Automobile Agreement which allows the U.S. and Canada to trade cars, trucks, parts, tires, and tubes, duty free.

Although Michigan was one of the primary states trading automobiles and parts to Canada, statistics are only available at the

national level. As shown in Table 43, in 1981, the U.S. auto balance of trade increased from $1.8 billion in 1980 to an estimated $1.9 billion, an 8.3 percent increase. This favorable balance of trade can be explained by the large value of parts exported by the U.S. to Canada. Canadians, on the other hand, exported more cars, trucks, tires, and tubes to the U.S.

Overall, total U.S. trade under the automotive agreement increased from $19.4 billion in 1980 to $22.6 billion in 1981. For the same period, imports rose from $8.8 to $10.3 billion, or 17.4 percent. Exports also grew from $10.6 billion in 1980 to $12.2 billion in 1981.

Michigan exports have more than doubled from 1976 levels, increasing from $6.9 billion to $14.9 billion in 1980. Among the states, Michigan ranks second after California as an exporter of manufactured goods.

Agriculture, another important segment of Michigan's international trade, increased seven-fold during the past decade, from about $100 million in the early 1970s to $742.2 million in fiscal 1980. The largest increase occurred in fiscal 1980 which jumped $248 million, or 50 percent from the previous year.

Feed grains, Michigan's most important agricultural export item in fiscal 1980, accounted for $287.3 million, or 38.7 percent of the state's total agricultural exports. Vegetables, including dry beans, were the second most important export products with a total of $116.7 million, or 15.7 percent. Exports of soybeans ranked third with $107.8 million, followed by wheat at $101.2 million, and fruit at $26.1 million. Other important products included hides and skins, meats, tallow, and other products. (See Table 44.)

TABLE 44
Michigan Agricultural Exports, 1978-1980
(Millions)

Commodity	1978	1979	1980
Feed Grains	$184.4	$186.3	$287.3
Fruits	17.6	22.9	26.1
Livestock	42.4	49.1	52.3
Soybeans	78.6	76.2	107.8
Vegetables	66.0	74.5	116.7
Wheat	70.9	51.8	101.2
Other	33.5	33.6	50.8
TOTAL	$493.4	$494.4	$742.2

Source: United States Department of Agriculture.

Japan was by far the largest export market for Michigan agricultural products for the fifth consecutive year. In fiscal 1980, Japan imported $114.8 million worth of agricultural products from Michigan. Mexico was second, importing about $56 million. Mexico was followed closely by Canada and the Netherlands, each importing about $55 million worth of farm products from the state.

Michigan currently offers six international ports of entry: Battle Creek, Detroit, Grand Rapids, Port Huron, Saginaw, and Sault Sainte Marie. Currently, Lansing is being considered as a new international port of entry. The advantage of establishing a port of entry for Lansing is that it would reduce shipment time and costs for companies importing products directly through Lansing. Also, international flights could arrive and depart directly from Lansing.

1982 Outlook

In 1982, the merchandise trade balance is expected to worsen due to the strength of the U.S. dollar. When the value of the dollar is strong, the relative price of U.S. goods increases, and therefore, reduces foreign demand for U.S. products. Conversely, the prices paid by U.S. importers for foreign goods are depressed, and therefore, U.S. demand for imports increases. As the value of the dollar declines, this trend will be reversed; however, because the fall of the dollar will occur gradually, with the value of the dollar remaining above 1980 levels throughout 1982, the trade balance is expected to continue to decline.

While the United States would like to persuade Western Europe and Japan to open their markets to more U.S. goods, many trading partners are reluctant to reduce trade barriers during the worldwide economic slump.

In 1982, OPEC prices are expected to remain stable, while the demand for petroleum products is likely to decline. If fuel conservation measures continue, and the demand for energy declines, dramatic OPEC price increases are not likely to occur during the rest of the decade.

Exports of Michigan agricultural products are expected to taper off for several reasons. First, the world market is dominated by abundant supplies which reduces foreigners' need for U.S. farm goods. Second, farm product demand from foreign countries has been dampened by the uncertainties about our relations with Poland and Libya. Finally, worldwide recession and high interest rates, which tend to constrain the ability of developing countries to buy larger volumes of agricultural products, have discouraged many foreign importers from buying beyond immediate needs.

Thus, the level of international trade is expected to diminish in Michigan. Consequently, the state plans to explore new foreign markets for agricultural and forestry products in order to maintain current trade levels in the years to come.

APPENDIX A
INTERGOVERNMENTAL ISSUES

TABLE 41
Michigan Tourism Indicators, 1978-81
(Thousands)

	1978	1979	1980	1981	Percent Change 79-80	Percent Change 80-81
Number of Delegates at Major Convention Facilities	1,075.1	1,143.4	1,114.0	1,554.0	-2.6	39.5
Mackinac Bridge Crossings	2,539.6	2,293.4	2,260.1	2,320.5	-1.5	2.7
State Park Camping Attendance						
Region I (U.P.)	1,192.1	954.6	932.9	961.0	-2.3	3.0
Region II (Northern L.P.)	2,686.5	2,496.8	2,398.7	2,423.8	-3.9	1.0
Region III (Southern L.P.)	2,015.3	1,946.5	1,854.9	1,871.8	-4.7	0.9
Total	5,893.9	5,397.9	5,186.5	5,256.6	-4.0	1.3
Travel Information Visitors	1,609.0	1,537.8	1,712.4	1,875.5	11.4	9.5

Source: Michigan Departments of Commerce, Natural Resources, and Transportation.

INTERGOVERNMENTAL ISSUES

State Financial Assistance to Local Units

The continuing depressed economy in Michigan has affected local government, much as it has state government. While aggregate property tax revenues have kept up with inflationary pressures, municipalities and counties have shared in the downturn in state revenues. An 8 percent fall-off in gas and weight tax revenues between fiscal 1980 and fiscal 1981 adversely affected the ability of cities, villages, and county road commissions to meet ordinary maintenance needs. As Table A-1 indicates, without any change in existing law, these funds are not anticipated to grow in the current or ensuing fiscal years.

In fiscal 1981, state revenue sharing payments declined 6.5 percent. This contrasts sharply with the average growth of about ten percent during the preceding three fiscal years. Part of this decline is attributable to a $27 million reduction in these payments under Executive Order 1981-8; the remainder results from seriously diminished state sales, income, and single business tax collections. A second Executive Order, 1981-9, applies to the current state fiscal year and has reduced state revenue sharing payments by eliminating the $3.2 million May, 1982 census delay payment, reducing county income tax payments by $5 million and the June intangibles tax payment from $9.5 million to $2.4 million, and by eliminating the $2.7 million relative tax burden payment.

Despite the issuance of a $270 million Executive Order in October, 1981, state revenues have continued to lag behind increasing expenditure demands. Thus, additional measures are needed to balance the current year's budget. Among other measures, the Governor has proposed eliminating the $54.6 million August income tax payment and the $3.5 million September single business tax payment to local units. These payments would be restored in the first quarter of the 1983 fiscal year and would be distributed in the same way as the unappropriated fiscal 1982 funds would have been allocated. Since no local unit of government in Michigan has a fiscal year coinciding with that of the state, this measure should not cause year end deficits for any municipality or county, although some units may need to borrow or may experience a loss of interest earnings because of the proposed action.

With some economic improvement forecast for fiscal 1983, state revenue sharing payments are estimated to increase by about 18 percent, aside from the general fund augmentation. In recognition of a continuing tight budget condition, however, an appropriation for relative tax burden payments has not been recommended.

Federal-State-Local Relations

As an indirect result of lower state tax revenues and a reduced share of total U.S. population, federal revenue sharing to local governments has declined. In fiscal 1981, the initial entitlement for all units of local government in the state was $196.3 million. In fiscal years 1982 and 1983, this amount is projected to be $193.8 million and $179.5 million, respectively.

This decline in federal revenue sharing to local governments would not be a matter of serious concern were it not accompanied by the funding and allocation uncertainties posed by the President's new federalism proposals. Of the 40 or so federal programs proposed to be transferred to the states beginning in fiscal 1984, many have a direct impact on local governments including, in addition to federal revenue sharing, Community Development Block Grants, Urban Development Action Grants, urban mass transit funding, and sewer and water grants.

New federalism comes at a time when the states, especially Michigan are in a unique recessionary period without the prospect of a vigorous recovery. In the past, federal spending comprised a counter-cyclical force when the economy was in a recession. Currently, sharp cutbacks in federal spending play just the opposite role and become pro-cyclical, countered only by the increase of disposable income resulting from tax cuts.

Reductions in federal spending in Michigan during the current fiscal year amount to about $600 million, with about $50 million coming from state budget programs and the remainder from grants to individuals and employment programs, such as CETA.

Because of the severely constrained state revenue and spending policies of the past few years, it has been a general policy of the state administration not to replace reduced federal spending, except where such programs merit diverting money from state-funded programs.

While the direction of the President's program is clear, specifics will not be known until later and an assessment must be made of the federal impact on state and local governments and on individuals in the state. The relationship between the state and local governments is never a static one, but it is imperative that we work together to meet changes in the economy and in federal funding patterns.

APPENDIX B
SELECTED 1981 PUBLIC ACTS OF ECONOMIC SIGNIFICANCE

SELECTED PUBLIC ACTS OF 1981

Banking and Finance

Auto Loan Interest (P.A. 163-165)

Extends for one year, to December 1, 1982, the 16.5 percent interest rate ceiling on loans for automobiles.

Mortgage Interest (P.A. 190)

Extends until July 1, 1982 the exemption for mortgage loans from the 7 percent interest ceiling. Extends exemption from any ceiling for loans in excess of $100,000 secured by liens against property other than single-family residences. Adds December 31, 1982 expiration date for interest ceiling on deposit accounts established in connection with mortgages or land contracts.

Consumer Protection

Auto Dealer Regulation (P.A. 118)

Regulates activities between motor vehicle dealers and manufacturers. Defines market areas for dealers. Limits location of new dealerships to areas outside a six-mile radius of existing dealerships in counties of over 25,000 and a 10-mile radius in other counties. Prohibits terminating dealer agreements without good cause. Repeals P.A. 331 of 1978.

Auto Fraud (P.A. 115)

Allows secretary of state to suspend or deny a vehicle dealer's license if dealer is in violation of law prohibiting tampering with vehicle identification numbers.

Child Restraints (P.A. 117)

Requires that a child under four be secured in a child-restraint seat while riding in a car. Effective March 31, 1982.

Hospital Capacity Reduction (P.A. 121)

Creates and defines Hospital Capacity Reduction Corporation to implement statewide hospital bed reduction plan. Requires plans to place and retain persons displaced or otherwise affected by reduction. Designed to help contain medical care costs.

Married Women's Property Act (P.A. 216)

Clarifies the contractual and property rights of married women. Gives married women the same rights and responsibilities as men when entering into financial contracts. Removes remnants of English common law that freed married women of personal liability for their own contracts.

Local Government

Detroit Bonds (P.A. 77, 80, 81, 97, and 98)
Enables Detroit to sell bonds to finance a standing operating deficit of $125 million. Allows cities with deficits exceeding the amount that may be borrowed under Emergency Municipal Loan Fund Act and greater than could be covered by tax anticipation notes to issue bonds to cover the deficit.

Detroit Income Tax (P.A. 60 and 61)
Permits Detroit income tax to be raised to 3 percent from 2 percent for residents and to 1.5 percent from 0.5 percent for nonresidents. Authorizes June 23 special election in Detroit to obtain local approval of increase. Designed to help the city balance its budget.

Detroit Utility Tax (P.A. 108)
Increases to $45 million from $37 million the amount which Detroit may obtain from its utility tax. Expires December 31, 1986. Designed to help the city balance its budget.

Downtown Development (P.A. 151)
Liberalizes the use of revenue bonds sold by Downtown Development Authorities. Allows the bonds to be used to purchase, improve, or build property; pay for engineering, legal, or financing expenses; pay interest on obligations during construction; and build reserves to operate and maintain a project until it can begin generating enough revenue on its own.

Municipal Bond Interest Rates (P.A. 214)
Allows each local governing body to establish bond interest rates up to a maximum of 18 percent or a rate set by the Municipal Finance Commission, whichever is higher.

School Debts (P.A. 143)
Allows schools to issue bonds or notes to cover deficits in excess of $100 per pupil with no limit and removes interest rate ceilings on such notes or bonds.

Solid Waste Systems (P.A. 246)
Permits municipalities to join together to form a solid waste management authority.

Natural Resources

Air and Water Surveillance Fees (P.A. 106 and 116)
Doubles maximum air and water pollution surveillance fees charged to manufacturers. Provides for phasing out fees by 1984.

Land Use Inventory (P.A. 224)

Extends until March 27, 1985 the date for the completion of a statewide land resource and current use inventory required by the 1979 wetlands preservation act.

Right to Farm (P.A. 93)

Protects farmers' right to farm. Prohibits declaring a farm which follows accepted agricultural practice a public or private nuisance. Prohibits declaring a farm a nuisance because of a new development within a one-mile radius.

State Taxation and Economic Development

Assessment Notices (P.A. 210)

Requires local assessors to provide additional information to property owners in assessment notices including: the state equalized value of the property for the previous and current year, the net change in equalized value, and the classification of the property. This new information is in addition to showing the previous and current assessment.

Cultural Property Tax Exemption (P.A. 212)

Exempts from property taxes any property owned by nonprofit organizations devoted to development of literature, music, painting, or sculpture which is available to general public on a regular basis.

Diesel Fuel Tax Discount (P.A. 16)

Extends until May 1, 1982, the six-cent per gallon discount on diesel fuel allowed to commercial vehicle owners who purchase special stickers.

Delinquent Tax Penalty (P.A. 162)

Increases the interest charged on delinquent taxes from 12 to 15 percent for those property taxes delinquent in 1981. Designed to help Wayne County float delinquent tax notes.

Economic and Social Opportunity Act (P.A. 230)

Designed to improve social and economic opportunities for low-income persons by creating programs aimed at reducing poverty within the state.

Fortified Wine (P.A. 153)

Changes Michigan's definition of wine from a maximum alcohol content of 16 to 21 percent, thus permitting beer and wine retailers to sell fortified wines containing up to 21 percent alcohol. Permits Michigan wineries to establish one wine-tasting location away from the winery. Reduces the taxes on dessert wines made from Michigan grapes. Allows Michigan wineries to distill brandy to make dessert wines for a nominal license fee. Converts the state's tax rate on wines to the metric system.

Home-heating Tax Credits (P.A. 152)

Renews the income tax credit designed to help low-income homeowners pay their home-heating costs.

Income Tax Credit (P.A. 135)

Permits Michigan workers to claim an income tax credit when unemployment benefits, upon which taxes had been paid, were returned.

Industrial Property Tax (P.A. 211)

Provides for property tax relief under law for industrial expansion credits for leased personal property upon which the lessee pays the tax.

Kammer Trust Fund Borrowing (P.A. 217 and 218)

Permits the state to borrow from the Kammer Recreational Land Acquisition Trust Fund and establishes guidelines for any future borrowing from the fund. Provides that the state could borrow from the fund in the future only if the Governor declares there is a fiscal emergency and no other funds are available to resolve the crisis. Requires a three-fourths vote of the Legislature.

Liquor Pricing (P.A. 139)

Continues the current pricing structure for distilled spirits until July 31, 1983. Retains the state liquor markup of 51 percent and the liquor distributors' discount of 17 percent.

Lottery Jar Game (P.A. 229)

Permits nonprofit and charitable organizations to run "jar ticket" games at their fund-raisers.

Lottery Revenue (P.A. 40)

Dedicates revenues from the state lottery to the School Aid Fund.

Medicaid Accounting (P.A. 221)

Permits the state to use cash accounting for Medicaid funds. Helps avert fiscal 1981 state deficit.

Methanol (P.A. 99)

Eliminates methanol from preferential gasohol tax rate.

Property Taxes (P.A. 68)

Requires assessors to levy taxes based on the value of property as equalized by the State Board of Equalization, even if the board's figures are under appeal to the State Tax Tribunal.

Railroad Fund Transfer (P.A. 129)

Transfers $20.8 million to the state general fund from the delinquent railroad tax fund to balance the fiscal 1981 budget.

Sales and Use Tax Collection Fees (P.A. 219 and 220)
Increases the collection fees permitted retailers who collect the sales and use taxes.

Single Business Tax (P.A. 208)
Revises business tax treatment of lease-rental payments and capital acquisition deductions for firms selling or buying investment tax credits.

Solar Energy Exemption (P.A. 232)
Streamlines application process for property tax exemptions for solar, wind, and water energy devices. Allows exemptions for groundwater heat pumps and swimming pool heaters.

Truth-in-Assessment (P.A. 213)
Requires that the maximum authorized city or township tax rate be reduced by the same proportion that the state equalized value of the city or township exceeds the assessed value. Encourages assessors to assess property at 50 percent of true cash value as required by law by preventing the city or township from benefiting when state equalized value is larger than assessed value.

Urban Land Assembly Fund (P.A. 171)
Creates a state Urban Land Assembly Fund to make loans to municipalities for acquiring and redeveloping large tracts of land suitable for industrial plant sites.

Workers' Compensation Reform Package (P.A. 192-204)
Revamps the workers' compensation system by making certain changes in benefits and eligibility to save employers $300 million. Reduces benefits to injured workers who collect social security or company pensions and generally eliminates fringe benefits from the calculation of average weekly wage, on which maximum workers' compensation benefit levels are based. Denies benefits to any disabled worker who turns down an offer of "reasonable" new work. Calls for a mandatory 20 percent cut in disability insurance rates.

Transportation

Semitrailer Lengths (P.A. 147)
Increases allowable length of semitrailers to 48 feet as long as entire rig does not exceed 60 feet.

Wages and Employment

Unemployment Insurance (P.A. 107)
Suspends payment of extended benefits to persons who refuse to accept work which is listed with state employment service and meets federal standards.

APPENDIX C
STATISTICAL TABLES

CONTENTS

Employment

		Page
Table C-1	Michigan Labor Force and Employment Estimates, 1970-1981	105
Table C-2	Michigan Labor Force, Employment and Unemployment, Quarterly Averages, 1973-1981	106
Table C-3	Michigan Manufacturing and Durable Goods Employment, 1970-1981	107
Table C-4	Michigan Manufacturing and Nondurable Goods Employment, 1970-1981	108
Table C-5	Michigan Nonmanufacturing Employment, 1970-1981	109
Table C-6	Michigan Government Employment, 1970-1981	110
Table C-7	Michigan SMSA and County Employment and Unemployment Rates, 1980 and 1981	111
Table C-8	U.S. and Michigan Manufacturing Industries, Average Weekly and Hourly Earnings, 1961-1981	113
Table C-9	Michigan Manufacturing Industries, Average Weekly Earnings, 1969-1981	114
Table C-10	Michigan Manufacturing Industries, Average Weekly Hours, 1969-1981	115

Income

Table C-11	Michigan Personal Income by Major Sources, 1972-1981	116
Table C-12	Quarterly Personal Income by Major Sources, Quarterly, 1975-1980	117
Table C-13	U.S. and Major Industrial States Personal Income and Real Per Capita Personal Income, 1977-1980	119

Prices

Table C-14	U.S. Consumer Price Index—All Urban Consumers, 1981	120
Table C-15	Detroit Consumer Price Index—All Urban Consumers, 1981	121
Table C-16	U.S. and Detroit Consumer Price Indices, 1968-1981	122
Table C-17	U.S. and Detroit Consumer Price Indices and Inflation Rates, 1942-1981	124

Finance and Construction

Table C-18 New Incorporations in Michigan, 1955-1981 . . 125
Table C-19 Michigan Liquid Assets, 1970-1981 126
Table C-20 U.S. Interest Rates, 1960-1981 127
Table C-21 New Private Housing Units Authorized in Michigan SMSAs, 1976-1981 128

Motor Vehicles and Public Utilities

Table C-22 Motor Vehicle Registrations, 1956-1981 . . . 129
Table C-23 New Passenger Car Sales in Michigan, 1964-1981 130
Table C-24 State Share of Passenger Car Assemblies, 1967-1981 Model Years 131
Table C-25 U.S. Motor Vehicle Production, 1960-1981 . . 132
Table C-26 U.S. Automobile Sales, Truck Sales, Inventories, and Stock, 1956-1981 133
Table C-27 U.S. and Michigan Motor Vehicle Industry Employment, Earnings, and Hours, 1956-1981. 134
Table C-28 U.S. Automobile Price Indices, Personal Consumption Expenditures, and Installment Credit, 1956-1981 135
Table C-29 U.S. Motor Vehicle Production and Auto Sales, Quarterly,1973-1981 136
Table C-30 Rate Changes Granted to Regulated Michigan Utilities in 1981 137

Agriculture

Table C-31 Prices Received by Michigan Farmers, 1969-1981 138
Table C-32 Michigan Farm Income Components, 1969-1981 139
Table C-33 Number of Farms, Average Size, and Land in Farms in Michigan, 1951-1982. 140

Population

Table C-34 U.S. and Michigan Resident Population, July 1, 1950 - July 1, 1981 141
Table C-35 Michigan Population by County, 1970-1980 . . 142
Table C-36 U.S. Population Ranked by State, 1980 . . . 145
Table C-37 Michigan School Enrollment Grades K-12, 1974-1985 146
Table C-38 Michigan Elementary, Secondary, and Higher Education Student Enrollments, 1966-1982 . . 148

TABLE A-1
State Financial Assistance to Local Units of Government
(Millions)

Source of Revenue	Estimated Expenditures 1980-81				Appropriations and Estimated Distribution[1] 1981-82				Recommendations and Estimated Distribution 1982-83			
	Cities & Villages	Town-ships	Counties	Total	Cities & Villages	Town-ships	Counties	Total	Cities & Villages	Town-ships	Counties	Total
I. Unrestricted State Shared Rev.												
A. Sales Tax	$140.063	$ 90.936	$ --	$ 230.999	$151.526	$ 96.878	$ --	$ 248.404	$176.200	$112.600	$ --	$ 288.800
B. Income Tax	93.701	7.974	48.304	149.979	81.269	7.037	44.911	133.217	127.900	13.500	76.200	217.600
C. Intangibles Tax	--	--	--	--	1.464	.936	--	2.400	5.800	3.700	--	9.500
D. SBT	52.190	4.428	--	56.618	45.260	3.914	--	49.174	59.900	5.200	--	65.100
E. General Fund[2]	--	--	--	--	--	--	--	--	36.200	3.200	18.700	58.100
Total	$285.954	$103.338	$ 48.304	$ 437.596	$279.519	$108.765	$ 44.911	$ 433.195	$406.000	$138.200	$ 94.900	$ 639.100
II. Restricted State Revenue												
A. Michigan Transportation Fund	$120.674	$ --	$217.299	$ 337.973	$115.047	$ --	$207.690	$ 322.737	$114.560	$ --	$ 206.810	$ 321.370
B. Other	6.060	1.200	1.200	8.460	6.081	1.271	.380	7.732	6.081	1.271	.380	7.732
Total	$126.734	$ 1.200	$218.499	$ 346.433	$121.128	$ 1.271	$208.070	$ 330.469	$120.641	$ 1.271	$ 207.190	$ 329.102
III. Programmatic Grants												
A Mental Health	$ --	$ --	$329.084	$ 329.084	$ --	$ --	$501.154	$ 501.154	$ --	$ --	$ 549.177	$ 549.177
B. Public Health	8.029	--	21.577	29.606	9.553	--	26.538	36.091	11.414	--	34.738	46.152
C. Social Services	--	--	44.692	44.692	--	--	50.848	50.848	--	--	69.048	69.048
D. Other	37.703	.491	26.694	64.888[3]	43.093	.694	33.351	77.138[3]	44.306	.708	36.653	131.474[3]
Total	$ 45.732	$ .491	$422.047	$ 531.727	$ 52.646	$ .694	$611.891	$ 719.457	$ 55.720	$ .708	689.616	$ 795.851
IV. Reimbursement for Property Exempt from Taxes												
A. Single Business Tax Inventory Reimbursement	$ 69.850	$ 4.694	$ 29.979	$ 104.523	$ 69.400	$ 4.510	$ 29.799	$ 103.709	$ 69.600	$ 4.520	$ 29.880	$ 104.000
B. Other	2.681	2.902	3.929	9.512	2.900	3.001	4.362	10.263	2.900	3.081	4.701	10.682
Total	$ 72.531	$ 7.596	$ 33.908	$ 114.035	$ 72.300	$ 7.511	$ 34.161	$ 113.972	$ 72.500	$ 7.601	$ 34.581	$ 114.682
V. Other Reimbursement	$ 3.871	$ 2.264	$ 2.419	$ 8.554	$ 4.057	$ .189	$ .420	$ 4.666	$ 4.098	$ .150	$ .050	$ 4.298
Grand Total	$534.822	$114.889	$725.177	$1,438.035	$529.650	$118.430	$899.453	$1,601.759	$658.959	$147.930	$1,026.337	$1,883.033

[1] As adjusted by Executive Order 1981-9.

[2] The Governor's FY 1982-83 Budget Recommendations include a reduction of $58,100,000 in state shared income tax and Single Business Tax revenues in FY81-82, with a general fund revenue augmentation in FY 82-83.

[3] Does not add across. Allocation to local units cannot be estimated for Aging and Mass Transportation grants.

Source: Michigan Department of Management and Budget.

Property Taxes

Table C-39 Michigan Real and Personal Property Values, Taxes, and Tax Rates, 1952-1981 149
Table C-40 Michigan Real and Personal Property Values by Class, 1966-1981 150
Table C-41 Michigan General Property Taxes by Local Unit of Government, 1958-1980 151
Table C-42 Michigan School Property Taxes, 1958-1980 . 152

TABLE C-1
Michigan Labor Force and Employment Estimates, 1970-1981
(Thousands)

Year	Total Labor Force	Employed[1]	Unemployed[2]	Percent Unemployed	Wage and Salary Workers	Workers Involved in Labor-Management Disputes
1970	3,589	3,349	241	6.7	2,999.1	36.1
1971	3,621	3,345	276	7.6	2,995.5	10.7
1972	3,696	3,439	258	7.0	3,119.0	2.8
1973	3,805	3,581	223	5.9	3,284.3	4.9
1974	3,881	3,593	288	7.4	3,277.7	9.9
1975	3,895	3,408	486	12.5	3,136.6	3.5
1976	3,994	3,621	373	9.4	3,283.1	6.4
1977	4,117	3,780	336	8.2	3,442.5	6.9
1978	4,198	3,909	289	6.9	3,609.4	5.4
1979	4,313	3,978	335	7.8	3,637.0	5.2
1980	4,298	3,757	541	12.6	3,454.1	6.0
1981	4,373	3,837	536	12.3	3,451.8	2.9
1980: January	4,275	3,807	468	11.0	3,500.8	1.3
February	4,293	3,800	493	11.5	3,499.1	1.3
March	4,248	3,773	475	11.2	3,491.3	4.6
April	4,232	3,710	522	12.3	3,438.0	4.1
May	4,293	3,690	602	14.0	3,416.6	5.0
June	4,390	3,762	628	14.3	3,424.3	5.1
July	4,348	3,722	626	14.4	3,348.8	16.8
August	4,322	3,783	539	12.5	3,370.3	8.4
September	4,285	3,761	524	12.2	3,435.2	12.8
October	4,293	3,762	532	12.4	3,491.5	5.9
November	4,305	3,756	549	12.8	3,519.5	4.1
December	4,296	3,762	533	12.4	3,514.2	3.0
1981: January	4,267	3,682	585	13.7	3,437.2	2.1
February	4,251	3,647	604	14.2	3,420.9	2.3
March	4,258	3,695	564	13.2	3,442.6	3.0
April	4,327	3,799	528	12.2	3,461.5	3.5
May	4,391	3,887	504	11.5	3,493.4	2.6
June	4,470	3,975	495	11.1	3,498.4	4.0
July	4,481	3,951	530	11.8	3,455.0	3.8
August	4,467	3,975	492	11.0	3,418.1	3.6
September	4,374	3,906	469	10.7	3,484.9	4.1
October	4,438	3,926	512	11.5	3,477.4	2.3
November	4,404	3,883	521	11.8	3,447.4	1.5
December	4,352	3,724	627	14.4	3,385.0	2.3

[1]Includes agricultural and nonagricultural employment. Excludes those involved in labor-management disputes.

[2]Excludes workers not active in the labor market and workers directly involved in labor-management disputes.

Source: Michigan Employment Security Commission.

TABLE C-2
Michigan Labor Force, Employment and Unemployment, Quarterly Averages, 1973-1981
(Thousands)

Year/ Quarter	Labor Force	Employment	Unem-ployment	Percent Unemployed
1973: I	3,737	3,467	270	7.2
II	3,786	3,579	207	5.5
III	3,839	3,636	203	5.3
IV	3,861	3,657	204	5.3
1974: I	3,864	3,587	277	7.2
II	3,848	3,579	268	7.0
III	3,915	3,632	283	7.2
IV	3,899	3,575	324	8.3
1975: I	3,916	3,352	564	14.4
II	3,880	3,359	520	13.4
III	3,892	3,426	466	12.0
IV	3,892	3,495	398	10.2
1976: I	3,927	3,513	414	10.5
II	3,974	3,587	387	9.7
III	4,047	3,679	367	9.1
IV	4,026	3,701	326	8.1
1977: I	4,070	3,685	385	9.5
II	4,092	3,777	315	7.7
III	4,145	3,792	353	8.5
IV	4,166	3,872	295	7.1
1978: I	4,157	3,845	312	7.5
II	4,192	3,910	282	6.7
III	4,212	3,916	296	7.0
IV	4,234	3,968	266	6.3
1979: I	4,270	3,926	344	8.1
II	4,311	3,980	330	7.7
III	4,338	4,014	324	7.5
IV	4,334	3,992	342	7.9
1980: I	4,272	3,793	479	11.2
II	4,305	3,721	584	13.5
III	4,318	3,755	563	13.0
IV	4,298	3,760	538	12.5
1981: I	4,259	3,675	584	13.7
II	4,396	3,887	509	11.6
III	4,441	3,944	497	11.2
IV	4,398	3,344	553	12.6

Source: Michigan Employment Security Commission.

TABLE C-6
Michigan Government Employment, 1970-1981
(Thousands)

Year	Total Government Employment	Federal Government	State Government	Local Government
1970	506.7	57.7	116.0	333.0
1971	509.5	54.9	117.8	336.8
1972	526.9	55.3	122.5	349.1
1973	534.4	55.0	123.9	355.5
1974	562.6	56.3	127.5	378.8
1975	583.1	56.1	132.6	394.4
1976	594.6	55.5	135.1	404.0
1977	596.8	54.7	136.9	405.2
1978	611.4	54.6	143.6	413.2
1979	621.0	56.7	147.7	416.6
1980	627.8	58.4	151.1	418.3
1981	618.4	54.9	147.0	416.6
1980: January	621.8	55.9	150.2	415.7
February	640.8	56.1	158.1	426.6
March	642.5	57.2	156.2	429.1
April	638.1	59.9	157.9	420.3
May	649.3	62.6	153.7	433.0
June	631.7	62.4	146.3	423.0
July	606.3	62.8	139.7	403.8
August	604.6	59.4	139.8	405.4
September	604.0	57.2	144.0	402.8
October	632.8	55.8	158.1	418.9
November	637.0	55.4	158.7	422.9
December	624.3	56.1	150.5	417.7
1981: January	619.2	54.7	153.7	410.8
February	629.6	54.8	154.2	420.6
March	627.0	54.3	150.9	421.8
April	625.4	54.7	154.5	416.2
May	630.5	54.3	151.2	425.0
June	613.1	55.3	141.8	416.0
July	596.2	55.6	132.4	408.2
August	587.2	55.9	131.3	400.0
September	612.4	54.8	142.5	415.1
October	628.6	54.7	151.5	422.4
November	628.2	54.6	151.6	422.0
December	623.8	54.6	148.4	420.8

Source: Michigan Employment Security Commission.

TABLE C-7
Michigan SMSA and County Employment and Unemployment Rates, 1980 and 1981

Area	1980 Number Employed	1980 Unemployment Rate	1981[1] Number Employed	1981[1] Unemployment Rate
Michigan	3,757,000	12.6	3,837,000	12.3
SMSA				
Ann Arbor-Ypsilanti	132,600	8.2	134,525	8.3
Battle Creek	71,000	11.6	72,800	10.8
Benton Harbor	63,300	13.2	64,500	12.7
Detroit	1,763,700	13.1	1,792,682	12.6
Flint	188,900	17.7	200,125	14.7
Grand Rapids	286,900	8.4	298,825	8.9
Jackson	58,400	11.6	59,650	11.3
Kalamazoo-Portage	123,500	8.5	124,825	8.8
Lansing-East Lansing	212,000	10.5	220,800	10.9
Muskegon-Muskegon Heights	67,600	13.4	69,275	13.3
Saginaw	87,100	14.4	90,550	11.9
Upper Peninsula	118,800	12.6	121,425	13.2
County				
Alcona	2,500	20.0	2,500	21.1
Alger	3,250	14.5	3,200	15.3
Allegan	30,250	11.4	31,275	10.9
Alpena	13,450	14.2	13,900	13.9
Antrim	6,275	16.1	5,825	17.9
Arenac	5,100	15.0	5,300	11.5
Baraga	2,875	13.5	2,975	14.1
Barry	16,800	10.8	17,225	11.1
Bay	45,300	15.2	47,225	12.3
Benzie	3,700	16.4	3,650	20.5
Berrien	63,300	13.2	64,500	12.7
Branch	18,750	13.7	18,250	11.8
Calhoun	54,175	11.9	55,575	10.7
Cass	18,300	13.1	19,625	10.7
Charlevoix	8,025	15.1	7,925	15.4
Cheboygan	7,750	19.9	7,725	21.1
Chippewa	9,225	19.1	9,600	20.5
Clare	8,150	15.3	8,125	15.1
Clinton	25,600	9.9	26,650	9.3
Crawford	2,875	17.3	2,975	19.8
Delta	15,025	11.7	16,825	10.2
Dickinson	11,550	8.5	11,300	11.1
Eaton	38,700	9.8	40,300	8.3
Emmet	11,300	12.4	11,625	14.4
Genesee	163,250	17.9	173,375	15.0
Gladwin	7,025	13.8	7,250	13.3
Gogebic	7,850	8.7	8,575	9.1
Grand Traverse	25,275	9.2	25,000	12.1
Gratiot	14,000	14.0	14,950	12.3
Hillsdale	17,625	11.9	18,675	9.1
Houghton	13,200	11.6	13,625	13.1
Huron	11,600	16.8	11,975	16.0

TABLE C-7 (cont.)
Michigan SMSA and County Employment and Unemployment Rates, 1980 and 1981

Area	1980 Number Employed	1980 Unemployment Rate	1981[1] Number Employed	1981[1] Unemployment Rate
Ingham	124,825	10.6	130,000	11.4
Ionia	22,925	11.9	23,866	11.5
Iosco	8,175	14.6	8,325	13.2
Iron	5,275	11.3	5,225	15.6
Isabella	24,175	8.3	24,950	8.3
Jackson	58,400	11.6	59,650	11.3
Kalamazoo	94,950	7.9	95,975	8.7
Kalkaska	6,475	8.5	6,425	9.3
Kent	212,475	8.7	221,420	9.3
Keweenaw	850	15.0	850	14.5
Lake	2,225	16.0	2,400	15.4
Lapeer	27,825	12.6	28,275	11.5
Leelanau	7,075	9.6	7,025	11.8
Lenawee	33,025	14.6	31,250	13.0
Livingston	39,875	11.1	40,525	11.4
Luce	2,675	13.0	2,300	18.8
Mackinac	5,350	16.7	4,750	21.6
Macomb	284,050	13.6	288,725	12.8
Manistee	8,500	13.0	6,800	16.2
Marquette	25,900	13.6	25,600	12.3
Mason	11,075	13.1	9,275	13.5
Mecosta	13,375	9.3	13,325	10.3
Menominee	9,800	9.3	9,850	10.3
Midland	26,050	10.5	26,825	10.4
Missaukee	3,775	15.2	3,575	14.7
Monroe	55,225	11.6	56,550	10.6
Montcalm	17,200	14.4	18,500	14.0
Montmorency	2,025	25.7	2,025	21.8
Muskegon	59,650	13.4	61,150	12.9
Newaygo	11,050	15.8	11,600	15.6
Oakland	410,025	10.9	416,775	11.1
Oceana	7,925	14.1	8,125	15.6
Ogemaw	6,425	14.0	6,575	13.0
Ontonagon	2,950	12.6	3,275	10.5
Osceola	6,775	13.7	6,925	12.0
Oscoda	1,925	18.9	1,950	19.4
Otsego	8,250	8.8	8,025	10.2
Ottawa	74,375	7.4	77,475	7.9
Presque Isle	3,600	20.0	3,575	20.4
Roscommon	4,825	15.4	5,100	14.7
Saginaw	87,100	14.4	90,550	11.9
St. Clair	53,950	12.5	54,825	12.1
St. Joseph	22,575	11.6	24,375	10.2
Sanilac	12,725	18.8	12,800	17.9
Schoolcraft	3,075	15.2	3,025	17.5
Shiawassee	25,650	15.9	27,250	13.2
Tuscola	21,125	16.9	23,400	15.0
Van Buren	28,550	10.3	28,875	10.1
Washtenaw	132,600	8.2	134,525	8.3
Wayne	948,025	14.1	963,575	13.0
Wexford	8,525	16.0	8,075	16.3

[1] Average of January to November data.

Source: Michigan Employment Security Commission.

TABLE C-8
U.S. and Michigan Manufacturing Industries,
Average Weekly and Hourly Earnings, 1961-1981

Year	Michigan			United States		
	Average Weekly Earnings	Average Hourly Earnings	Real Average Weekly Earnings (1967 Dollars)	Average Weekly Earnings	Average Hourly Earnings	Real Average Weekly Earnings (1967 Dollars)
1961	$112.32	$ 2.80	$126.63	$ 92.34	$2.32	$103.06
1962	121.43	2.91	136.59	96.56	2.39	106.58
1963	128.27	3.02	142.84	99.63	2.46	108.65
1964	135.11	3.11	149.29	102.97	2.53	110.84
1965	143.69	3.22	155.28	107.53	2.61	113.79
1966	145.10	3.35	150.05	112.34	2.72	115.58
1967	145.78	3.47	145.78	114.90	2.83	114.90
1968	164.15	3.79	157.38	122.51	3.01	117.57
1969	166.78	3.97	150.80	129.51	3.19	117.95
1970	168.22	4.14	143.29	133.33	3.35	114.99
1971	187.72	4.59	154.25	142.44	3.57	117.34
1972	211.52	4.94	167.61	154.71	3.82	123.46
1973	228.63	5.27	169.99	166.46	4.89	124.76
1974	232.03	5.63	155.62	176.80	4.42	119.43
1975	250.76	6.15	156.43	190.79	4.83	117.56
1976	290.97	6.81	172.27	209.32	5.22	121.76
1977	326.27	7.54	180.86	228.90	5.68	125.00
1978	346.20	8.07	178.36	249.27	6.17	127.57
1979	359.72	8.73	164.41	268.94	6.69	123.71
1980	382.26	9.51	150.78	288.62	7.27	116.94
1981	423.99	10.49	153.01	317.47[2]	7.96[2]	116.95[2]
1980: January	361.88	9.05	152.56	279.28	6.93	119.76
February	364.21	9.13	151.50	280.30	6.99	118.57
March	375.76	9.32	154.70	280.99	7.06	117.18
April	366.91	9.24	147.83	282.98	7.11	116.69
May	361.50	9.15	145.53	281.00	7.15	114.74
June	369.29	9.35	143.86	282.30	7.22	114.01
July	373.43	9.43	147.19	284.70	7.30	114.89
August	371.61	9.38	145.67	289.98	7.36	116.27
September	386.40	9.64	148.90	293.83	7.42	116.74
October	407.87	9.95	154.32	297.35	7.49	117.11
November	408.63	9.99	153.39	302.44	7.58	118.05
December	439.33	10.22	162.90	305.96	7.63	118.41
1981: January	417.41	10.16	155.46	308.37	7.69	118.38
February	395.38	10.10	146.33	308.05	7.74	117.04
March	420.58	10.23	156.82	311.22	7.80	117.39
April	418.24	10.23	153.54	317.58	7.90	119.03
May	434.93	10.43	158.04	320.39	7.95	119.10
June	439.91	10.55	156.83	320.40	7.99	118.10
July	421.94	10.47	149.04	320.80	8.02	116.91
August	423.54	10.43	149.40	323.20	8.08	116.89
September	410.96	10.65	144.60	319.90	8.14	114.54
October	436.95	10.84	155.22	321.53	8.14	114.87
November	429.12	10.84	153.48	320.69	8.16	114.25
December[1]	438.84	10.92	157.69	N.A.	N.A.	N.A.

[1] Preliminary.

[2] 11-month average.

Source: Michigan Employment Security Commission.

TABLE C-3
Michigan Manufacturing and Durable Goods Employment, 1970-1981
(Thousands)

Year	Manufacturing	Durable Goods	Lumber and Wood Products	Furniture and Fixtures	Primary Metal Products	Fabricated Metal Products	Non-electrical Machinery	Electrical Machinery	Motor Vehicles and Equipment	Other Transportation Equipment	Other Durable Goods
1970	1,081.1	863.0	13.8	20.7	89.3	142.3	163.5	42.5	335.3	15.5	40.1
1971	1,059.2	847.1	14.1	19.6	86.8	140.6	137.3	40.6	353.6	14.5	40.0
1972	1,097.4	879.5	15.2	20.8	87.6	147.0	140.3	42.3	369.6	14.7	42.0
1973	1,178.8	953.1	16.1	22.5	95.6	156.9	155.6	47.1	401.0	15.0	43.3
1974	1,114.0	897.2	15.5	21.9	93.9	141.6	158.1	45.4	366.1	11.5	43.2
1975	983.7	778.2	12.8	18.6	79.5	120.4	136.6	38.2	321.2	11.6	39.3
1976	1,061.7	845.9	14.1	19.6	86.2	137.3	138.0	39.6	357.7	12.8	40.1
1977	1,128.4	905.9	14.4	20.0	91.6	145.7	150.6	40.9	386.5	13.6	42.6
1978	1,179.6	952.8	14.4	21.5	91.7	155.5	159.8	42.7	409.6	14.1	43.5
1979	1,160.1	935.1	14.1	23.0	88.0	150.8	167.2	41.9	392.7	12.9	44.5
1980	1,007.2	803.8	11.8	21.5	69.1	121.2	157.3	37.5	333.5	10.6	41.3
1981	1,008.1	807.1	11.1	21.3	66.1	121.3	153.7	38.2	344.8	11.0	39.6
1980: January	1,072.8	860.3	12.4	23.1	78.8	128.6	167.1	39.1	357.1	11.7	42.4
February	1,065.5	856.0	12.3	23.0	79.2	130.5	166.2	39.3	351.7	11.7	42.1
March	1,057.4	848.1	12.1	22.8	78.2	130.2	164.3	39.2	347.9	11.7	41.7
April	997.3	793.6	12.0	22.7	72.0	125.5	160.9	36.9	312.3	10.5	40.8
May	949.3	750.6	11.7	21.2	66.6	115.8	159.4	36.1	288.7	9.9	41.2
June	967.0	766.7	11.7	21.0	64.5	111.3	156.8	36.3	314.3	10.1	40.7
July	926.9	736.5	11.1	19.1	60.2	105.7	151.9	36.2	302.1	10.0	40.2
August	943.4	743.7	11.6	20.5	59.5	112.0	148.3	35.4	304.8	10.2	41.4
September	994.3	790.0	11.4	21.1	64.6	118.4	151.9	37.5	333.3	10.3	41.5
October	1,025.7	822.3	11.7	21.3	67.0	123.3	151.5	37.7	358.5	10.3	41.0
November	1,044.3	839.7	11.9	21.3	69.3	127.1	154.1	38.1	365.9	10.2	41.8
December	1,043.0	838.0	11.8	21.1	68.9	126.1	155.1	38.7	365.6	10.1	40.6
1981: January	1,021.7	821.0	11.8	21.4	69.4	123.6	154.4	38.9	351.6	10.3	40.0
February	1,010.8	810.2	11.4	21.5	69.0	121.7	153.5	38.7	344.0	10.6	40.0
March	1,024.0	823.4	11.2	21.2	68.5	124.0	154.5	39.3	353.9	10.8	39.8
April	1,026.1	824.4	11.4	21.0	68.3	124.9	155.3	39.9	352.7	11.1	39.9
May	1,029.7	824.9	11.3	20.7	68.0	124.7	156.2	39.9	352.3	11.3	40.2
June	1,035.2	830.0	11.6	21.0	68.2	126.3	157.0	40.6	353.4	11.4	40.7
July	1,013.5	810.7	11.4	21.3	66.9	120.0	153.6	39.6	347.4	11.1	39.9
August	984.8	782.3	10.9	21.5	65.4	119.0	152.4	36.3	325.8	10.8	39.6
September	1,021.0	815.5	11.5	21.6	66.6	125.1	156.0	38.8	344.8	11.0	40.5
October	1,005.2	804.7	11.1	22.0	63.9	119.9	153.0	36.7	348.2	10.9	39.1
November	983.4	788.1	11.0	21.8	61.5	116.1	151.4	36.2	341.3	11.0	38.3
December	941.4	749.5	10.5	21.0	57.5	109.7	147.5	33.4	322.6	11.1	37.2

Source: Michigan Employment Security Commission.

TABLE C-4
Michigan Manufacturing and Nondurable Goods Employment, 1970-1981
(Thousands)

Year	Total Manufacturing	Total Nondurable Goods Manufacturing	Food and Kindred Products	Textile Mill Products and Apparel	Paper and Allied Products	Printing, Publishing and Allied	Chemicals, Petroleum and Related	Other Nondurable Goods
1970	1,081.1	218.1	54.6	22.4	28.9	34.6	47.5	30.1
1971	1,059.2	212.1	53.4	23.6	26.8	34.2	45.0	29.1
1972	1,097.4	217.9	52.3	24.9	26.5	36.7	44.7	32.8
1973	1,178.8	225.7	51.7	27.3	26.9	36.9	45.6	37.3
1974	1,114.0	216.8	51.8	24.7	26.3	35.5	44.4	34.1
1975	983.7	205.5	51.5	22.2	23.5	34.6	45.9	27.8
1976	1,061.7	216.3	51.3	25.9	24.6	33.7	48.1	32.7
1977	1,128.4	222.5	51.9	27.3	24.4	32.3	49.7	36.9
1978	1,179.6	226.8	52.3	27.7	23.7	33.6	48.7	40.8
1979	1,160.1	225.0	52.1	25.8	23.8	34.1	47.8	41.4
1980	1,007.2	203.4	49.5	18.4	20.9	33.3	46.8	34.5
1981	1,008.1	201.0	48.4	18.7	20.2	33.5	45.2	35.1
1980: January	1,072.8	212.5	50.1	20.7	22.7	33.6	48.3	37.1
February	1,065.5	209.5	48.1	20.7	22.2	33.7	47.8	37.0
March	1,057.4	209.3	47.7	21.2	21.7	33.7	47.9	37.1
April	997.3	203.7	48.0	17.9	21.9	33.0	47.4	35.5
May	949.3	198.7	49.5	16.9	20.8	32.4	46.7	32.4
June	967.0	200.3	50.3	17.7	20.9	32.9	46.5	32.0
July	926.9	190.4	48.9	13.2	19.6	33.1	46.6	29.0
August	943.4	199.7	51.1	16.4	20.2	33.1	46.4	32.5
September	994.3	204.3	51.9	18.3	19.8	33.4	46.2	34.7
October	1,025.7	203.4	49.7	18.7	20.2	32.9	46.3	35.6
November	1,044.3	204.5	49.8	19.3	19.9	33.4	45.6	36.6
December	1,043.0	205.0	48.8	19.3	20.3	34.0	45.6	37.0
1981: January	1,021.7	200.7	48.2	18.0	20.2	33.4	45.1	35.8
February	1,010.8	200.6	48.0	18.3	20.5	33.6	45.1	35.1
March	1,024.0	200.6	47.0	18.6	20.4	33.7	45.1	35.8
April	1,026.1	201.7	47.0	19.3	20.4	33.9	45.2	35.9
May	1,029.7	204.8	48.5	19.9	20.3	34.0	45.6	36.5
June	1,035.2	205.2	48.6	20.2	20.4	34.0	46.0	36.0
July	1,013.5	202.8	50.1	18.5	20.1	33.3	45.8	35.0
August	984.8	202.5	49.9	18.2	20.3	33.5	45.4	35.2
September	1,021.0	205.5	49.6	20.0	20.2	34.0	45.3	36.4
October	1,005.2	200.5	47.8	19.3	20.2	33.4	45.1	34.7
November	983.4	195.3	47.6	17.9	20.0	32.3	44.4	33.1
December	941.4	191.9	47.8	16.0	20.0	33.0	43.9	31.3

Source: Michigan Employment Security Commission.

TABLE C-5
Michigan Nonmanufacturing Employment, 1970-1981
(Thousands)

Year	Total Nonmanufacturing Industries	Construction	Transportation, Communication, & Utilities	Wholesale Trade	Retail Trade	Finance, Real Estate, & Insurance	Services	Mining
1970	1,411.3	118.5	150.4	144.8	458.3	119.7	407.8	11.8
1971	1,426.4	120.5	148.2	144.8	460.7	121.0	420.1	11.1
1972	1,494.7	127.5	148.0	146.0	478.9	127.7	454.6	12.0
1973	1,571.1	131.4	153.6	150.6	503.3	130.3	489.0	12.9
1974	1,601.1	125.8	153.2	153.5	510.9	134.2	510.1	13.4
1975	1,569.8	106.3	144.8	146.9	509.6	134.0	514.0	13.8
1976	1,626.8	110.0	145.6	148.8	531.1	136.9	541.2	13.2
1977	1,717.3	122.8	150.8	151.8	557.1	142.2	580.5	12.1
1978	1,818.4	138.8	155.9	164.2	584.9	147.4	613.9	13.3
1979	1,855.9	139.5	160.6	170.4	590.9	154.5	626.8	13.2
1980	1,819.1	117.1	150.5	161.0	576.8	156.1	645.1	12.5
1981	1,825.3	109.2	147.4	156.2	577.2	155.7	666.3	12.4
1980: January	1,806.2	115.3	153.5	163.1	574.5	155.4	632.1	12.5
February	1,792.8	109.3	152.8	164.9	561.5	154.8	637.1	12.4
March	1,791.4	107.0	152.3	161.5	564.5	155.2	638.4	12.5
April	1,802.6	113.1	150.5	161.1	567.6	155.2	642.1	13.0
May	1,818.0	118.4	150.3	160.0	577.9	156.3	641.8	13.3
June	1,825.6	118.5	150.5	162.7	579.7	156.5	644.2	13.5
July	1,815.6	119.2	149.0	158.3	575.0	157.1	645.2	11.8
August	1,822.3	121.0	148.8	160.0	575.6	157.6	648.1	11.2
September	1,836.9	124.2	149.3	160.5	578.3	156.8	656.6	11.2
October	1,833.0	125.3	149.7	159.5	575.7	156.4	653.6	12.8
November	1,878.2	122.0	149.9	160.1	586.1	155.9	651.3	12.9
December	1,846.9	112.0	149.3	160.0	605.2	155.6	651.2	12.6
1981: January	1,795.3	103.1	148.7	156.4	568.0	156.6	655.1	12.4
February	1,780.5	97.4	148.8	155.5	559.1	156.5	651.2	12.0
March	1,791.6	98.6	148.5	155.2	564.9	156.4	656.2	11.8
April	1,810.0	105.8	148.2	154.7	574.5	156.3	657.8	12.7
May	1,833.2	112.7	148.2	157.1	582.8	156.4	663.2	12.8
June	1,850.1	115.7	148.3	157.5	586.6	156.6	672.2	13.2
July	1,845.3	118.2	148.0	154.6	580.1	156.7	675.2	12.9
August	1,846.1	117.1	147.8	156.3	579.8	156.2	675.7	13.2
September	1,851.5	116.8	147.5	157.1	582.9	155.1	678.9	12.9
October	1,843.6	117.4	146.3	157.2	579.2	154.4	676.9	12.2
November	1,835.8	110.5	145.0	156.4	581.8	153.6	676.7	11.8
December	1,819.8	96.8	143.3	155.8	587.0	153.0	673.0	11.4

Source: Michigan Employment Security Commission.

TABLE C-9
Michigan Manufacturing Industries, Average Weekly Earnings, 1969-1981

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Manufacturing Industries	$166.78	$168.22	$187.72	$211.52	$228.63	$232.03	$250.76	$290.97	$326.27	$346.20	$359.72	$382.26	$423.99
Durable goods	170.67	171.45	192.26	217.80	235.79	239.66	258.53	302.14	340.16	359.69	373.10	396.25	438.66
Basic lumber products	101.14	105.61	113.36	118.80	128.14	136.26	147.72	164.68	171.62	199.06	212.96	225.23	248.57
Furniture	130.23	135.32	147.71	159.34	164.55	175.78	181.16	198.62	222.20	238.90	251.50	268.09	298.94
Primary metals	162.41	170.55	194.07	217.94	243.12	256.15	268.20	319.81	357.01	390.99	397.07	420.20	460.85
Fabricated metals	176.38	174.07	179.02	204.50	221.19	222.41	240.64	285.85	324.34	334.09	337.88	360.42	398.46
Nonelectrical machinery	177.65	178.31	188.83	216.19	238.46	247.48	253.01	279.47	319.50	348.29	381.82	403.07	440.99
Electrical machinery	147.22	150.27	174.64	193.76	196.51	207.58	221.51	251.75	284.96	309.48	300.75	322.32	345.03
Transportation equipment	178.08	179.01	207.35	237.67	255.55	255.99	284.17	334.89	378.11	394.14	409.09	438.45	487.99
Nondurable goods	149.14	152.41	166.41	182.81	191.62	198.43	218.67	241.69	267.46	285.94	302.90	324.37	353.58
Food and kindred products	146.41	151.21	160.41	176.12	187.17	203.33	224.80	244.40	263.38	280.57	305.54	333.30	361.98
Textiles and apparel	147.61	138.49	169.86	191.52	200.83	207.44	227.62	258.26	303.92	324.85	331.47	345.37	388.80
Paper	147.60	153.52	172.23	191.44	201.87	212.53	225.55	253.78	282.90	312.99	329.36	352.21	397.91
Printing and publishing	157.69	163.54	168.98	185.05	189.39	197.48	212.99	231.08	248.78	267.20	285.82	298.98	328.47
Chemicals	161.87	166.92	184.66	201.49	210.16	218.89	247.68	276.98	313.47	338.56	355.32	372.54	405.82

Source: Michigan Employment Security Commission

TABLE C-10
Michigan Manufacturing Industries, Average Weekly Hours, 1969-1981

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Manufacturing Industries	42.0	40.6	40.9	42.8	43.4	41.2	40.8	42.7	43.3	42.9	41.2	40.2	40.4
Durable goods	42.1	40.6	40.9	43.0	43.9	41.4	40.9	43.0	43.7	43.3	41.4	40.2	40.
Basic lumber products	39.2	39.0	39.0	38.9	39.2	38.4	38.6	39.3	39.5	39.1	38.6	38.0	40.3
Furniture	41.5	40.0	40.4	41.3	40.6	40.4	39.0	40.0	40.8	41.0	39.5	39.5	39.5
Primary metals	40.9	40.1	40.9	42.5	43.9	42.2	40.3	42.5	43.8	43.8	41.4	39.4	39.7
Fabricated metals	42.5	41.2	39.4	42.2	43.1	40.6	39.9	42.3	42.8	41.9	40.0	39.3	39.0
Nonelectrical machinery	43.8	41.4	40.2	42.7	44.2	43.1	41.0	41.7	43.1	43.4	43.3	42.0	41.7
Electrical machinery	41.8	40.9	42.2	43.0	42.6	41.7	40.6	42.0	43.0	42.9	40.5	40.8	39.9
Transportation equipment	41.9	40.4	41.5	43.9	44.7	41.0	41.6	44.6	44.8	44.3	41.6	40.1	40.7
Nondurable goods	41.6	40.3	40.8	41.7	41.2	40.3	40.3	41.1	41.7	41.5	40.5	40.3	40.6
Food and kindred products	41.3	40.9	40.7	41.4	41.0	41.4	41.7	41.8	41.9	41.2	41.3	41.6	41.4
Textile mill products and apparel	40.9	37.4	40.1	42.0	41.7	39.7	39.6	40.8	42.1	41.5	38.8	38.4	38.8
Paper	44.7	42.8	44.1	45.3	44.9	44.0	43.5	44.4	45.3	45.2	43.4	43.0	44.1
Printing and publishing	39.1	37.5	37.4	37.3	37.2	36.9	36.1	36.8	37.9	37.9	37.1	36.1	36.9
Chemicals	42.1	41.4	41.3	42.1	42.1	41.7	41.3	42.1	42.9	43.2	42.3	42.2	42.5

Source: Michigan Employment Security Commission.

TABLE C-11
Michigan Personal Income by Major Sources, 1972-1981
(Millions)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Labor and Proprietors' Income by Type										
Wage and Salary Disbursements	$ 30,019	$ 33,869	$ 35,172	$ 35,461	$ 40,685	$ 46,158	$ 52,093	$ 56,850	$ 57,082	$ 60,859
Other Labor Income	2,715	3,162	3,449	3,785	4,471	5,349	6,172	6,978	7,814	8,619
Proprietors Income	2,610	2,845	2,834	2,815	2,906	3,460	3,912	4,413	4,488	4,641
Labor and Proprietors' Income by Industry										
Farms	477	633	717	647	506	603	717	792	650	537
Manufacturing	14,712	17,221	17,161	16,657	20,401	23,971	26,977	28,915	27,888	30,828
Durables	12,307	14,584	14,405	13,832	17,113	20,248	22,884	24,467	23,393	26,081
Nondurables	2,405	2,637	2,756	2,824	3,288	3,722	4,093	4,447	4,495	4,747
Nonmanufacturing										
Contract Construction	1,992	2,104	2,109	1,884	2,089	2,530	3,087	3,422	3,037	2,990
Trans., Comm., and Utilities	1,954	2,183	2,276	2,339	2,660	2,997	3,443	3,838	3,999	4,199
Wholesale Trade	1,958	2,112	2,352	2,379	2,458	2,714	3,163	3,639	3,768	3,847
Retail Trade	3,492	3,847	4,021	4,183	4,598	5,051	5,608	6,085	6,253	6,641
Finance, Ins., & Real Estate	1,344	1,397	1,447	1,554	1,793	2,079	2,405	2,722	2,991	3,033
Services	4,526	5,037	5,495	5,982	6,665	7,602	8,652	9,804	10,951	11,477
Mining	144	168	226	249	261	267	293	347	357	395
Government	4,672	5,094	5,562	6,098	6,528	7,027	7,682	8,509	9,311	10,003
Other Industries	74	81	89	91	103	128	150	168	180	169
Total Labor & Proprietors' Income By Place of Work	35,344	39,876	41,455	42,062	48,062	54,967	62,176	68,241	69,385	74,119
Less: Contributions for Social Insurance	1,480	1,943	2,080	2,121	2,383	2,571	2,923	3,294	3,606	4,255
Plus: Residence Adjustment	165	192	204	228	284	326	375	408	435	475
Net Labor and Proprietors' Income By Place of Residence	34,029	38,125	39,580	40,169	45,963	52,722	59,629	65,356	66,214	70,339
Plus: Property Income	4,931	5,442	6,198	6,554	7,240	8,093	9,085	10,889	12,867	14,913
Plus: Transfer Income	4,322	4,816	5,973	7,836	8,131	8,422	8,854	10,170	13,258	14,849
Total Personal Income By Residence	$ 43,282	$ 48,383	$ 51,750	$ 54,559	$ 61,333	$ 69,237	$ 77,567	$ 86,414	$ 92,339	$ 100,101
Total Real Personal Income (1967 Dollars)	$ 34,296	$ 35,972	$ 34,708	$ 34,036	$ 36,313	$ 38,380	$ 39,962	$ 39,495	$ 36,426	$ 36,125

Source: U.S. Department of Commerce, Bureau of Economic Analysis. 1981 estimates by Michigan Department of Management and Budget.

TABLE C-12
Michigan Personal Income by Major Sources, Quarterly, 1975-1980[1]
(Millions, Seasonally Adjusted Annual Rate)

	1975				1976				1977			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Wage and Salary Disbursements	$34,540.0	$34,968.0	$36,278.0	$37,416.0	$39,343.0	$40,859.0	$41,328.0	$42,772.0	$44,582.0	$46,044.0	$47,668.0	$48,410.0
Farm	118.0	115.0	113.0	115.0	119.0	125.0	127.0	128.0	139.0	139.0	141.0	144.0
Mining	193.0	198.0	203.0	207.0	196.0	202.0	217.0	206.0	218.0	233.0	203.0	190.0
Contract Construction	1,524.0	1,486.0	1,464.0	1,521.0	1,543.0	1,622.0	1,649.0	1,687.0	1,767.0	1,934.0	2,035.0	2,088.0
Manufacturing	13,448.0	13,656.0	14,462.0	15,058.0	16,507.0	17,406.0	17,427.0	18,378.0	19,497.0	20,165.0	20,841.0	21,029.0
Durable	11,022.0	11,207.0	11,938.0	12,406.0	13,717.0	14,522.0	14,487.0	15,338.0	16,322.0	16,890.0	17,547.0	17,626.0
Nondurable	2,426.0	2,449.0	2,524.0	2,652.0	2,790.0	2,884.0	2,940.0	3,040.0	3,175.0	3,275.0	3,294.0	3,403.0
Wholesale Trade	2,061.0	2,045.0	2,057.0	2,093.0	2,110.0	2,116.0	2,144.0	2,152.0	2,243.0	2,334.0	2,431.0	2,430.0
Retail Trade	3,387.0	3,372.0	3,491.0	3,574.0	3,664.0	3,798.0	3,857.0	3,938.0	4,022.0	4,131.0	4,263.0	4,366.0
Finance, Insur., Real Estate	1,316.0	1,338.0	1,348.0	1,382.0	1,400.0	1,438.0	1,496.0	1,510.0	1,555.0	1,599.0	1,664.0	1,665.0
Trans., Comm., Utilities	1,911.0	1,946.0	2,028.0	2,061.0	2,182.0	2,220.0	2,262.0	2,331.0	2,382.0	2,461.0	2,583.0	2,598.0
Services	4,465.0	4,520.0	4,639.0	4,830.0	5,000.0	5,188.0	5,275.0	5,427.0	5,627.0	5,811.0	6,073.0	6,216.0
Government	6,062.0	6,237.0	6,417.0	6,518.0	6,560.0	6,679.0	6,808.0	6,946.0	7,064.0	7,166.0	7,360.0	7,605.0
Federal Civilian	762.0	759.0	762.0	780.0	812.0	839.0	831.0	851.0	872.0	873.0	896.0	946.0
Federal Military	196.0	199.0	194.0	204.0	208.0	204.0	205.0	212.0	210.0	209.0	187.0	199.0
State and Local	5,104.0	5,279.0	5,461.0	5,534.0	5,540.0	5,636.0	5,772.0	5,883.0	5,982.0	6,084.0	6,277.0	6,460.0
Other Industries	55.0	55.0	56.0	57.0	62.0	65.0	66.0	69.0	68.0	71.0	74.0	79.0
Other Labor Income	3,579.0	3,726.0	3,971.0	4,163.0	4,483.0	4,777.0	4,904.0	5,172.0	5,470.0	5,716.0	6,038.0	6,169.0
Proprietors' Income	2,648.0	2,781.0	2,886.0	2,860.0	2,680.0	2,655.0	2,584.0	2,711.0	2,920.0	3,022.0	3,109.0	3,375.0
Farm	376.0	460.0	523.0	507.0	370.0	318.0	254.0	260.0	367.0	364.0	334.0	523.0
Nonfarm	2,272.0	2,321.0	2,363.0	2,353.0	2,310.0	2,337.0	2,330.0	2,451.0	2,553.0	2,658.0	2,775.0	2,852.0
Total Income by Place of Work	40,767.0	41,475.0	43,135.0	44,439.0	46,506.0	48,291.0	48,816.0	50,655.0	52,972.0	54,782.0	56,815.0	57,954.0
Less: Contributions for Soc.In.	2,070.0	2,089.0	2,141.0	2,183.0	2,309.0	2,388.0	2,395.0	2,456.0	2,569.0	2,636.0	2,710.0	2,714.0
Plus: Residence Adjustment	249.0	247.0	253.0	260.0	285.0	292.0	298.0	305.0	333.0	350.0	359.0	366.0
Net Income by Place of Residence	38,946.0	39,633.0	41,247.0	42,516.0	44,482.0	46,195.0	46,719.0	48,504.0	50,736.0	52,496.0	54,464.0	55,606.0
Plus: Dividends, Interest, Rent	6,156.0	6,264.0	6,391.0	6,510.0	6,699.0	6,909.0	7,122.0	7,360.0	7,522.0	7,731.0	7,907.0	8,048.0
Plus: Transfer Payments	7,305.0	7,832.0	7,963.0	8,189.0	8,045.0	7,926.0	8,160.0	8,285.0	8,386.0	8,308.0	8,509.0	8,560.0
Total Personal Income by Residence	$52,407.0	$53,729.0	$55,601.0	$57,215.0	$59,226.0	$61,030.0	$62,001.0	$64,149.0	$66,644.0	$68,535.0	$70,880.0	$72,214.0

TABLE C-12 (continued)
Michigan Personal Income by Major Sources, Quarterly, 1975-1980[1]
(Millions, Seasonally Adjusted Annual Rate)

	1978				1979				1980			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Wage and Salary Disbursements	$50,603.0	$51,699.0	$53,294.0	$55,156.0	$58,191.0	$57,715.0	$57,370.0	$56,989.0	$58,599.0	$55,675.0	$56,942.0	$61,006.0
Farm	135.0	136.0	140.0	147.0	156.0	162.0	165.0	165.0	172.0	176.0	179.0	179.0
Mining	226.0	250.0	257.0	267.0	278.0	284.0	284.0	293.0	304.0	294.0	254.0	314.0
Contract Construction	2,299.0	2,333.0	2,455.0	2,516.0	2,662.0	2,625.0	2,691.0	2,681.0	2,754.0	2,316.0	2,223.0	2,402.0
Manufacturing	21,999.0	22,435.0	22,962.0	24,045.0	25,777.0	24,839.0	23,741.0	22,973.0	23,794.0	21,444.0	22,318.0	25,265.0
Durable	18,548.0	18,899.0	19,375.0	20,240.0	21,882.0	20,949.0	19,907.0	19,073.0	19,944.0	17,710.0	18,499.0	21,238.0
Nondurable	3,450.0	3,536.0	3,587.0	3,805.0	3,895.0	3,890.0	3,834.0	3,899.0	3,850.0	3,734.0	3,819.0	4,027.0
Wholesale Trade	2,623.0	2,699.0	2,809.0	2,874.0	3,050.0	3,123.0	3,191.0	3,180.0	3,234.0	3,148.0	3,149.0	3,246.0
Retail Trade	4,530.0	4,629.0	4,718.0	4,849.0	5,004.0	5,027.0	5,040.0	5,107.0	5,191.0	4,983.0	5,127.0	5,257.0
Finance, Insur., & Real Estate	1,780.0	1,813.0	1,886.0	1,936.0	2,046.0	2,043.0	2,135.0	2,123.0	2,258.0	2,270.0	2,314.0	2,398.0
Trans., Comm., & Utilities	2,772.0	2,854.0	2,885.0	2,948.0	3,175.0	3,169.0	3,192.0	3,250.0	3,203.0	3,197.0	3,206.0	3,360.0
Services	6,517.0	6,675.0	6,972.0	7,099.0	7,363.0	7,553.0	7,850.0	7,993.0	8,294.0	8,299.0	8,548.0	8,804.0
Government	7,643.0	7,785.0	8,119.0	8,381.0	8,585.0	8,791.0	8,979.0	9,120.0	9,290.0	9,443.0	9,520.0	9,680.0
Federal Civilian	943.0	965.0	976.0	1,021.0	1,043.0	1,032.0	1,025.0	1,044.0	1,050.0	1,057.0	1,095.0	1,149.0
Federal Military	191.0	192.0	196.0	202.0	199.0	196.0	195.0	203.0	198.0	200.0	201.0	222.0
State and Local	6,509.0	6,627.0	6,947.0	7,159.0	7,343.0	7,563.0	7,759.0	7,873.0	8,042.0	8,186.0	8,224.0	8,308.0
Other Industries	80.0	90.0	92.0	94.0	97.0	100.0	103.0	105.0	104.0	105.0	103.0	102.0
Other Labor Income	6,534.0	6,622.0	6,864.0	7,147.0	7,692.0	7,728.0	7,691.0	7,644.0	7,994.0	7,655.0	8,001.0	8,680.0
Proprietors' Income	3,404.0	3,520.0	3,685.0	3,821.0	3,931.0	4,033.0	4,163.0	4,258.0	4,042.0	3,755.0	3,911.0	4,054.0
Farm	457.0	449.0	482.0	477.0	549.0	656.0	646.0	666.0	415.0	397.0	384.0	395.0
Nonfarm	2,947.0	3,071.0	3,203.0	3,344.0	3,382.0	3,377.0	3,517.0	3,592.0	3,628.0	3,358.0	3,527.0	3,659.0
Total Income by Place of Work	60,540.0	61,841.0	63,843.0	66,123.0	69,814.0	69,475.0	69,224.0	68,891.0	70,635.0	67,085.0	68,854.0	73,740.0
Less: Contributions for Soc.Ins.	2,944.0	2,945.0	3,011.0	3,112.0	3,551.0	3,530.0	3,501.0	3,467.0	3,651.0	3,428.0	3,514.0	3,770.0
Plus: Residence Adjustment	381.0	401.0	410.0	426.0	424.0	431.0	440.0	452.0	457.0	457.0	460.0	480.0
Net Income by Place of Residence	57,977.0	59,297.0	61,243.0	63,437.0	66,686.0	66,376.0	66,163.0	65,876.0	67,441.0	64,114.0	65,800.0	70,450.0
Plus: Dividends, Interest, Rent	8,268.0	8,527.0	8,887.0	9,230.0	9,549.0	9,816.0	10,081.0	10,537.0	11,104.0	11,627.0	11,927.0	12,210.0
Plus: Transfer Payments	8,631.0	8,782.0	9,031.0	9,117.0	9,332.0	9,622.0	10,518.0	10,920.0	11,318.0	12,070.0	13,041.0	12,804.0
Total Personal Income by Residence	$74,876.0	$76,606.0	$79,161.0	$81,784.0	$85,567.0	$85,814.0	$86,762.0	$87,333.0	$89,863.0	$87,810.0	$90,769.0	$95,463.0

[1]The U.S. Bureau of Economic Analysis recently updated the personal income data on an annual basis, but have not yet updated the quarterly data. Therefore, this quarterly personal income data is not consistent with the annual data presented in Table C-11; however, this data does provide a reasonable quarterly trend for personal income.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

TABLE C-13
U.S. and Major Industrial States
Personal Income and Real Per Capita Personal Income, 1977-1980

State	Personal Income (millions)				Real Personal Income (millions of 1967 dollars)				Real Per Capita Personal Income (1967 dollars)			
	1977	1978	1979	1980	1977	1978	1979	1980	1977	1978	1979	1980
United States	$1,533,768	$1,717,816	$1,939,486	$2,162,936	$845,051	$879,128	$892,128	$876,392	$3,845	$3,959	$3,973	$3,858
Michigan	69,237	77,567	86,414	92,339	38,380	39,962	39,495	36,426	4,191	4,343	4,270	3,925
California	175,626	198,782	228,481	259,551	97,462	103,103	106,667	104,954	4,361	4,515	4,587	4,423
Florida	58,114	66,108	76,271	88,675	32,019	33,832	35,056	35,929	3,602	3,705	3,704	3,645
Illinois	91,040	100,196	110,608	120,434	51,845	52,541	51,541	49,057	4,545	4,595	4,512	4,286
Indiana	37,071	41,148	45,797	49,177	20,721	21,058	20,892	19,031	3,834	3,866	3,816	3,458
Massachusetts	41,836	45,937	51,705	58,232	22,811	23,557	24,286	24,263	3,971	4,102	4,227	4,219
New Jersey	58,741	64,658	71,934	80,724	31,666	32,972	33,756	34,032	4,313	4,482	4,578	4,605
New York	134,555	146,465	161,635	180,646	73,287	75,265	76,171	76,415	4,105	4,247	4,320	4,340
Ohio	76,332	84,418	93,977	102,410	42,103	42,852	42,389	39,073	3,909	3,970	3,926	3,798
Pennsylvania	82,776	90,640	101,581	112,220	45,556	46,506	47,138	45,935	3,834	3,919	3,970	3,862
Texas	88,506	101,180	117,948	136,146	47,789	50,313	51,914	52,264	3,623	3,727	3,783	3,664
Wisconsin	31,868	35,349	40,340	44,095	17,913	18,449	18,437	15,799	3,883	3,984	3,952	3,349

Source: Compiled by the Michigan Department of Management and Budget based on data from the U.S. Department of Commerce, Bureau of Economic Analysis, and the U.S. Department of Labor, Bureau of Labor Statistics.

TABLE C-14
U.S. Consumer Price Index--All Urban Consumers, 1981
(1967=100)

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual Average 1981	Percent Change 1980-81
ALL ITEMS	260.5	263.2	265.1	266.8	269.0	271.3	274.4	276.5	279.3	279.9	280.7	281.5	272.4	10.4
FOOD AND BEVERAGES	261.4	263.7	265.0	265.7	265.4	266.5	268.9	270.1	270.7	270.3	269.9	270.5	267.3	7.8
Food	268.6	270.8	272.2	272.9	272.5	273.6	276.2	277.4	278.0	277.6	277.1	277.8	274.6	7.9
Food at home	265.6	267.3	268.6	268.7	267.7	268.7	271.6	272.8	273.2	272.1	271.0	271.7	269.9	7.3
Cereals and bakery prod.	262.9	265.3	266.7	268.3	270.0	271.5	272.4	272.6	274.3	275.0	276.3	277.7	271.1	10.0
Meats,pltry,fish,eggs	255.1	252.5	250.5	247.7	247.0	248.7	254.1	255.8	257.7	256.4	254.2	253.7	252.8	4.4
Dairy products	240.1	242.1	242.6	243.5	243.8	243.8	244.2	248.8	244.3	244.6	245.0	245.5	243.6	7.1
Fruits and vegetables	257.6	267.3	278.2	281.9	276.8	278.1	284.4	286.1	281.6	275.2	272.0	276.4	276.3	12.0
Food away from home	280.9	284.7	286.1	288.2	289.3	290.6	292.4	293.7	294.8	296.2	297.2	297.7	291.0	9.0
Alcoholic beverages	193.7	195.9	197.1	197.8	199.1	199.8	200.5	201.4	202.5	201.4	202.3	202.7	199.5	7.1
HOUSING	279.1	280.9	282.6	284.8	288.5	292.2	297.0	299.7	303.7	303.5	304.2	305.2	293.5	11.5
Shelter	300.1	300.5	301.6	303.8	308.5	312.6	318.5	322.0	326.9	326.6	327.2	328.0	314.7	11.7
Rent, residential	200.9	201.9	203.0	204.2	205.9	206.8	207.8	210.3	211.9	213.6	215.0	216.5	208.2	8.7
Other rental costs	273.9	278.5	283.6	285.9	286.4	289.5	293.6	298.5	308.1	308.7	305.3	306.3	293.2	11.4
Homeownership	335.8	335.8	336.8	339.3	345.0	350.4	358.0	361.8	367.8	366.7	367.2	367.8	352.7	12.3
Fuel & other utilities	296.7	304.5	308.4	310.5	314.9	320.2	325.1	327.8	331.1	330.1	329.8	331.8	319.2	14.6
Fuels	375.4	387.4	393.7	396.5	403.3	411.7	417.2	419.5	422.4	419.0	417.6	420.0	407.0	16.5
Oil, coal & bottled gas	625.9	675.6	693.4	690.6	685.8	682.0	677.9	674.6	673.4	672.7	676.1	682.5	675.9	21.6
Gas(piped)& electricity	318.5	322.9	326.7	330.6	339.6	350.2	357.6	360.8	364.5	360.6	358.3	359.9	345.9	14.6
Hsehld. furnish & oper.	212.6	214.9	216.9	219.2	220.1	221.1	222.4	222.9	224.5	225.6	227.2	227.7	221.3	7.7
APPAREL AND UPKEEP	181.1	182.0	185.1	186.4	186.4	185.8	184.7	187.4	190.7	191.5	191.3	190.5	186.9	4.8
Apparel commodities	172.6	173.2	176.3	177.6	177.2	176.4	175.1	178.0	181.4	182.1	181.8	180.7	177.7	3.9
Men's and boys'	171.1	171.6	175.0	175.6	176.8	176.6	175.6	177.6	181.1	183.6	183.6	181.6	177.5	5.4
Women's and girls'	152.1	153.4	157.5	158.8	157.2	155.4	153.5	157.8	162.9	161.2	160.6	159.6	157.5	1.5
Infants' and toddlers'	249.7	254.3	255.3	259.2	256.9	260.0	259.8	263.6	266.4	268.5	264.9	259.4	259.8	8.7
Footwear	194.9	194.9	197.4	199.3	201.0	200.4	199.0	200.0	202.4	204.2	205.4	205.7	200.4	5.3
TRANSPORTATION	264.7	270.9	273.5	275.3	277.8	279.9	282.6	283.7	285.2	287.2	289.1	289.8	280.0	12.1
Private	262.9	269.4	271.7	273.4	276.0	277.9	279.6	280.5	281.9	283.9	285.8	286.5	277.5	11.4
Public	286.4	288.1	293.9	297.2	297.7	303.9	323.1	326.5	329.1	330.8	333.2	333.8	312.0	24.0
MEDICAL CARE	279.5	282.6	284.7	287.0	289.0	291.5	295.6	299.3	301.7	304.8	308.2	310.2	294.5	10.8
ENTERTAINMENT	214.4	216.7	218.2	219.2	220.3	220.8	221.1	222.3	224.0	225.5	226.8	227.3	221.4	7.8
OTHER GOODS & SERVICES	226.2	227.6	228.7	229.9	232.2	233.4	234.4	235.6	243.0	245.2	245.9	246.7	235.7	9.9
Commodities	245.4	248.3	249.8	250.8	251.9	253.2	255.0	255.2	257.7	257.9	258.0	258.4	253.6	8.4
Commodities less food	232.4	235.4	237.0	238.0	239.6	241.1	242.6	243.8	245.5	245.9	246.2	246.5	241.2	8.6

Source: U.S. Department of Labor, Bureau of Labor Statistics.

TABLE C-18
New Incorporations in Michigan, 1955-1981

Year	Profit	Nonprofit	Foreign (out of state)	Total
1955	4,619	1,094	379	6,092
1956	4,337	1,196	389	5,922
1957	3,842	1,391	461	5,694
1958	3,900	1,272	404	5,576
1959	4,812	1,209	527	6,548
1960	4,800	1,261	499	6,560
1961	4,788	1,312	497	6,597
1962	5,135	1,243	601	6,979
1963	5,102	1,241	528	6,871
1964	5,825	1,256	593	7,674
1965	6,152	1,286	627	8,065
1966	6,315	1,356	640	8,311
1967	6,341	1,361	715	8,417
1968	7,700	1,588	825	10,113
1969	9,586	1,767	1,064	12,417
1970	8,378	1,782	1,054	11,214
1971	8,270	1,993	1,082	11,345
1972	9,202	2,134	1,175	12,511
1973	9,709	1,878	1,093	12,680
1974	9,342	2,106	1,009	12,457
1975	9,996	2,138	926	13,060
1976	11,545	2,080	972	14,597
1977	13,273	2,082	956	16,311
1978	14,538	2,148	1,039	17,725
1979	18,654	2,217	1,062	21,933
1980	16,931	2,503	1,077	20,511
1981	17,139	2,288	1,277	50,116

Source: Michigan Department of Commerce, Corporation Division.

TABLE C-20
U.S. Interest Rates, 1960-1981
(Percent per annum)

Period	U.S. Government Security Yields: 3-month Treasury Bills[1]	U.S. Government Security Yields: 10 Year Issues	Commercial Paper (Prime, 4-6 months)	High-Grade Municipal Bonds (Standard & Poor's)	Corporate Bonds (Moody's Aaa)
1960	2.928	NA	3.85	3.73	4.41
1961	2.378	NA	2.97	3.46	4.35
1962	2.778	NA	3.26	3.18	4.33
1963	3.157	NA	3.55	3.23	4.26
1964	3.549	NA	3.97	3.22	4.40
1965	3.954	NA	4.38	3.27	4.49
1966	4.881	NA	5.55	3.82	5.13
1967	4.321	NA	5.10	3.98	5.51
1968	5.339	NA	5.90	4.51	6.18
1969	6.677	NA	7.83	5.81	7.03
1970	6.458	NA	7.72	6.51	8.04
1971	4.348	NA	5.11	5.70	7.39
1972	4.071	6.21	4.69	5.27	7.21
1973	7.041	6.84	8.15	5.18	7.44
1974	7.886	7.99	9.84	6.09	8.57
1975	5.838	7.61	6.32	6.89	8.83
1976	4.989	7.42	5.35	6.49	8.43
1977	5.265	8.41	5.60	5.56	8.02
1978	7.221	9.44	7.99	5.90	8.73
1979	10.041	10.65	10.91[2]	6.39	9.63
1980	11.506	11.46	12.29	8.51	11.94
1981	14.077	13.90	14.74	11.23	14.17

[1]Rate on new issues within period.

[2]Beginning November 1, 1979, data are for 6-months paper.

Source: *Economic Indicators*, Council of Economic Advisors, selected issues.

TABLE C-15
Detroit Consumer Price Index--All Urban Consumers, 1981
(1967=100)

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual Average 1981	Percent Change 1980-81
ALL ITEMS	268.5	270.2	268.2	272.4	275.2	280.5	283.1	283.6	284.2	281.5	279.6	278.3	277.1	9.3
FOOD AND BEVERAGES	254.3	258.1	257.9	258.8	259.2	259.4	261.5	261.5	262.8	263.1	264.6	264.8	260.5	7.7
Food	258.1	261.8	261.7	262.4	262.7	262.9	265.3	255.2	266.4	266.7	268.3	268.7	264.2	7.7
Food at home	259.6	262.7	262.2	263.0	263.0	263.2	266.5	266.3	267.6	267.8	269.7	270.4	265.2	7.8
Cereals and bakery prod.	269.7	274.2	271.5	276.8	275.2	277.4	276.7	274.6	278.9	280.2	279.6	284.4	276.6	8.6
Meats,pltry,fish,eggs	245.5	246.1	244.1	244.6	245.9	246.6	254.3	256.3	258.5	256.7	256.4	254.5	250.8	6.5
Dairy products	251.1	252.6	251.2	249.6	253.5	251.4	251.5	253.2	252.9	253.2	256.9	253.3	252.5	4.2
Fruits and vegetables	235.9	244.6	250.7	254.8	253.8	257.0	261.3	253.7	246.8	248.2	251.4	252.6	250.9	13.7
Other foods at home	317.4	321.7	322.0	320.4	317.0	314.7	315.0	315.6	319.7	321.5	326.9	332.0	320.3	8.3
Food away from home	265.1	270.6	271.2	271.5	272.8	273.1	273.5	273.5	274.6	275.2	275.9	275.9	272.7	7.8
Alcoholic beverages	228.8	232.7	232.7	235.5	238.0	237.0	235.8	237.4	239.9	239.6	240.8	237.0	236.3	6.7
HOUSING	297.5	297.0	290.0	297.3	301.2	313.8	315.5	317.0	316.5	307.6	302.3	299.6	304.6	9.2
Shelter	330.4	328.2	316.5	325.5	332.0	347.3	349.8	340.2	347.1	332.8	327.6	323.5	334.2	7.9
Rent, residential	201.7	204.9	204.8	203.2	205.0	204.7	204.6	205.6	207.2	208.4	210.0	212.8	206.1	6.2
Other rental costs	247.8	250.4	250.4	247.5	250.3	250.5	251.1	252.7	274.7	273.2	273.2	273.2	257.9	6.7
Homeownership	356.2	352.9	338.8	350.0	357.4	375.9	378.9	378.1	374.7	357.2	350.6	345.3	359.7	8.1
Fuel & other utilities	308.9	318.8	318.6	321.0	318.5	335.6	339.5	353.5	356.2	356.7	339.9	336.2	333.6	16.3
Fuels	368.6	383.9	383.0	386.7	382.6	408.6	410.6	432.1	436.4	432.1	405.9	399.9	402.5	16.0
Oil, coal & bottled gas	650.5	717.8	734.1	730.8	724.0	722.8	711.2	705.3	706.1	708.1	709.9	718.6	711.7	22.9
Gas(piped)& electricity	336.0	345.7	343.0	347.4	343.6	372.3	375.6	399.7	404.4	399.5	370.6	363.2	366.8	14.7
Hsehld. furnish & oper.	198.9	197.4	200.0	205.1	205.3	207.7	205.7	205.9	208.1	209.2	210.5	212.3	205.5	9.0
APPAREL AND UPKEEP	157.0	157.7	159.8	161.0	162.4	159.3	160.0	157.4	159.6	161.2	158.6	155.7	159.1	2.2
Apparel commodities	147.4	147.7	149.5	150.4	151.8	148.3	148.9	145.6	147.9	150.0	146.6	142.1	148.0	1.1
Men's and boys'	150.5	149.0	156.3	155.9	160.1	154.0	159.8	163.9	164.7	168.2	166.3	161.1	159.2	6.5
Women's and girls'	139.1	140.5	141.9	141.8	142.1	136.6	134.1	128.7	135.3	133.6	129.3	123.3	135.5	-2.2
Footwear	165.2	165.0	154.7	156.8	158.3	163.1	161.7	153.2	154.6	151.8	149.4	149.7	157.0	-2.9
TRANSPORTATION	265.8	268.4	271.7	274.4	277.7	278.2	284.5	284.4	284.5	288.5	289.6	289.3	279.7	13.3
Private	264.3	267.8	270.8	273.6	276.7	277.0	283.5	283.4	283.6	287.8	289.0	288.6	278.8	13.1
Public	279.8	281.9	291.3	291.9	299.6	306.1	306.5	307.3	306.5	304.0	304.0	304.0	298.6	17.6
MEDICAL CARE	309.2	313.8	314.8	316.7	318.9	319.8	320.7	320.9	323.7	327.0	327.5	328.0	320.1	7.5
ENTERTAINMENT	195.3	196.5	200.0	203.8	204.8	204.3	204.3	202.3	200.8	203.5	202.7	204.2	201.9	5.1
OTHER GOODS & SERVICES	218.3	222.3	224.1	224.6	226.1	226.6	227.8	227.6	237.8	238.0	238.0	238.9	229.2	8.9
Commodities	240.8	240.6	239.4	241.5	244.0	247.0	247.9	247.6	247.0	246.5	244.8	243.6	244.2	7.1
Commodities less food & bev.	229.9	228.3	226.7	229.2	232.3	236.2	236.7	236.4	235.1	234.4	231.5	229.8	232.2	6.8

Source: U.S. Department of Labor, Bureau of Labor Statistics.

TABLE C-16
U.S. and Detroit Consumer Price Indices, 1968-1981
(Annual Averages)

	1968		1969		1970		1971		1972		1973		1974	
	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit
All items	140.2	104.3	109.8	110.6	116.3	117.4	121.3	121.7	125.3	126.2	133.1	134.5	147.7	149.1
Food	103.6	103.1	108.9	108.9	114.9	115.2	118.4	117.3	123.5	122.9	141.4	143.6	161.7	164.1
Food at home	103.2	103.0	108.2	109.1	113.7	115.4	116.4	116.1	121.6	121.6	141.4	144.8	162.4	165.3
Cereals and bakery products	100.4	100.5	103.3	104.7	108.9	110.9	113.9	114.5	114.7	115.8	127.7	134.5	166.1	182.1
Meats, poultry, fish and eggs	102.2	102.8	110.3	113.5	116.5	121.1	116.9	119.1	128.0	131.2	160.4	166.5	163.9	167.4
Dairy products	103.3	104.8	106.7	108.5	111.8	113.6	115.3	113.4	117.1	114.7	127.9	127.5	151.9	154.9
Fruits and vegetables	107.9	104.9	109.3	106.1	113.4	110.9	119.1	114.9	125.0	118.4	142.5	135.6	165.8	158.9
Other foods at home	102.6	101.6	107.9	106.9	114.1	113.1	115.9	114.4	116.7	116.1	130.3	132.5	162.8	164.2
Food away from home	105.2	104.0	111.6	108.6	119.9	115.0	126.1	123.3	131.1	128.6	141.4	138.8	159.4	159.2
Housing	104.2	104.9	110.8	113.7	118.9	124.2	124.3	128.3	129.2	133.3	135.0	137.4	150.6	151.0
Shelter	104.8	106.2	113.3	118.7	123.6	133.2	128.8	137.3	134.4	143.1	140.7	147.4	154.3	159.5
Rent	102.4	103.3	105.7	107.1	110.1	111.5	115.2	116.6	119.0	120.4	124.2	124.4	130.2	129.8
Homeownership	105.7	106.8	116.0	121.0	128.5	137.6	133.7	141.4	140.1	147.7	146.7	152.1	163.2	165.5
Fuel and utilities	101.3	100.6	103.6	101.5	107.6	104.6	115.1	110.7	120.2	115.4	126.9	121.2	150.2	142.3
Fuel oil and coal	103.1	101.8	105.6	105.4	110.1	109.8	117.5	113.7	118.5	113.9	136.0	129.3	214.6	208.7
Gas and electricity	100.9	100.0	102.8	100.8	107.3	103.3	114.7	111.3	120.5	116.9	126.4	123.1	145.8	144.4
Hsehld. furnish. and oper.	104.4	103.5	109.0	106.3	113.4	109.4	118.1	112.6	121.0	115.1	124.9	117.3	140.5	130.5
Apparel and Upkeep	105.4	104.3	111.5	108.9	116.1	112.0	119.8	115.5	122.3	118.3	127.1	122.3	136.2	132.4
Men's and boys'	105.7	106.4	112.4	112.5	117.1	116.7	120.3	117.3	121.9	117.3	126.4	121.8	136.4	135.7
Women's and girls'	105.9	103.1	111.7	104.3	116.0	104.6	120.1	111.2	123.0	115.4	127.3	117.4	134.9	123.2
Footwear	105.3	103.6	111.8	111.2	117.7	118.5	121.5	120.7	124.9	124.8	130.2	132.6	138.1	144.6
Transportation	103.2	104.0	107.2	107.4	112.7	109.9	118.6	114.6	120.0	116.5	123.8	123.6	137.7	138.7
Private	103.0	103.4	106.5	106.6	111.1	108.5	116.1	111.8	117.5	113.9	121.5	121.3	136.6	137.2
Public	104.6	112.0	112.7	117.7	128.5	126.1	137.7	148.4	143.4	148.5	144.8	150.8	148.0	156.1
Medical Care	106.1	106.6	113.4	114.4	120.6	124.4	128.4	134.1	132.5	141.4	137.7	148.4	150.5	162.8

TABLE C-16 (Continued)
U.S. and Detroit Consumer Price Indices, 1968-1981
(Annual Averages)

	1975		1976		1977		1978		1979		1980		1981	
	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit
All items	161.2	160.3	170.5	168.9	181.5	180.4	195.4	194.1	217.4	218.8	246.8	253.5	272.4	277.1
Food	175.4	171.6	180.8	176.5	192.2	186.0	211.4	205.5	234.5	226.5	254.6	245.2	274.6	264.2
Food at home	175.8	171.1	179.5	173.3	190.2	183.5	210.2	203.5	232.9	225.8	251.5	246.1	269.9	265.2
Cereals and bakery products	184.8	189.8	180.6	184.5	183.5	193.7	199.9	208.9	220.1	229.2	246.4	254.8	271.1	276.6
Meats, poultry, fish and eggs	178.0	172.2	179.4	172.4	178.4	171.9	204.3	196.9	234.2	225.9	242.2	235.5	252.8	250.8
Dairy products	156.6	158.8	169.3	167.3	173.9	173.9	185.6	188.9	207.1	221.2	227.4	242.3	243.6	252.5
Fruits and vegetables	171.0	157.4	175.4	158.9	191.6	171.0	212.9	192.3	230.0	202.6	246.7	220.6	276.3	250.9
Other foods at home[1]	185.6	177.9	189.9	184.5	224.1	215.3	N.A.	244.2	N.A.	258.9	N.A.	295.8	N.A.	320.3
Food away from home	174.3	174.1	186.1	186.4	200.3	199.2	218.4	218.7	242.9	237.4	267.0	253.0	291.0	272.7
Housing	166.7	163.8	177.2	173.2	189.6	184.6	202.8	196.7	227.6	229.4	263.3	278.9	293.5	304.6
Shelter	169.7	170.3	179.0	177.2	191.1	188.0	210.4	204.0	239.7	245.2	281.7	309.8	314.7	334.2
Rent	137.3	136.1	145.4	142.1	153.5	150.8	164.0	162.6	176.0	176.5	191.6	194.1	208.2	206.1
Homeownership	181.7	177.2	191.7	184.3	204.9	195.4	227.2	212.2	262.4	258.9	314.0	332.8	352.7	359.7
Fuel and utilities	167.8	161.6	182.7	182.8	202.2	205.7	216.0	224.4	239.3	249.6	278.6	286.8	319.2	333.6
Fuel oil and coal	235.3	226.7	250.8	248.6	283.4	285.7	298.3	305.3	403.1	423.0	556.0	579.0	675.9	711.7
Gas and electricity	169.6	171.7	188.9	197.7	213.4	223.0	232.6	247.0	257.8	277.3	301.8	319.7	345.9	366.8
Hsehld. furnish. and oper.	158.1	145.0	168.5	156.6	177.0	160.5	177.7	161.6	190.3	174.7	205.4	188.5	221.3	205.5
Apparel and Upkeep	142.3	137.9	147.6	142.0	154.2	146.7	159.6	148.1	166.6	148.1	178.4	155.6	186.9	159.1
Men's and boys'	142.2	144.5	147.2	151.5	154.0	154.3	157.3	152.1	160.8	150.2	168.4	149.5	177.5	159.2
Women's and girls'	138.1	126.5	141.9	128.1	146.4	130.9	149.3	133.1	151.9	129.2	155.1	138.5	157.5	135.5
Footwear	144.2	146.9	149.9	147.2	156.9	150.8	163.8	147.5	176.7	156.6	190.3	161.7	200.4	157.0
Transportation	150.6	149.1	165.5	160.2	177.3	174.7	185.5	184.9	212.0	210.0	249.7	246.8	280.0	279.7
Private	149.8	148.0	164.6	159.5	176.7	174.8	185.0	184.5	212.3	210.1	249.2	246.5	277.5	278.8
Public	158.6	160.8	174.2	168.6	182.4	172.6	188.7	192.8	200.3	207.3	251.6	253.9	312.0	298.6
Medical Care	168.6	187.4	184.7	209.1	202.4	234.8	219.4	251.8	239.7	274.5	265.9	297.7	294.5	320.1

[1]Due to revisions made in the U.S. Consumer Price Index in 1978, the other foods at home category has been changed and is not comparable to previous years.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

TABLE C-17
U.S. and Detroit Consumer Price Indices and Inflation Rates, 1942-1981

	U.S.		Detroit			U.S.		Detroit	
Year	Index	Percent Change	Index	Percent Change	Year	Index	Percent Change	Index	Percent Change
1942	48.8	10.7	49.5	11.0	1962	90.6	1.1	88.9	0.2
1943	51.8	6.1	52.1	5.3	1963	91.7	1.2	89.8	1.0
1944	52.7	1.7	52.9	1.5	1964	92.9	1.3	90.5	0.8
1945	53.9	2.3	54.3	2.6	1965	94.5	1.7	92.6	2.3
1946	58.5	8.5	59.2	9.0	1966	97.2	2.9	96.7	4.4
1947	66.9	14.4	67.4	13.8	1967	100.0	2.9	100.0	3.4
1948	72.1	7.8	72.7	7.9	1968	104.2	4.2	104.3	4.3
1949	71.4	-1.0	71.8	-1.2	1969	109.8	5.4	110.6	6.0
1950	72.1	1.0	73.0	1.7	1970	116.3	5.9	117.4	6.1
1951	77.8	7.9	78.8	7.9	1971	121.3	4.3	121.7	3.7
1952	79.5	2.2	80.7	2.4	1972	125.3	3.3	126.2	3.7
1953	80.1	0.8	82.0	1.6	1973	133.1	6.2	134.5	6.6
1954	80.5	0.5	82.3	0.4	1974	147.7	11.0	149.1	10.9
1955	80.2	-0.4	82.2	-0.1	1975	161.2	9.1	160.3	7.5
1956	81.4	1.5	83.8	1.9	1976	170.5	5.8	168.9	5.4
1957	84.3	3.6	86.2	2.9	1977	181.5	6.5	180.4	6.8
1958	86.6	2.7	87.5	1.5	1978	195.4	7.7	194.1	7.6
1959	87.3	0.8	87.4	-0.1	1979	217.4	11.3	218.8	12.7
1960	88.7	1.6	88.2	0.9	1980	246.8	13.5	253.5	15.9
1961	89.6	1.0	88.7	0.7	1981	272.4	10.4	277.1	9.3

Source: U.S. Department of Labor, Bureau of Labor Statistics.

TABLE C-19
Michigan Liquid Assets, 1970-1981
(Millions)

End of Year	Total	Demand Deposits[1]	Time Deposits[1]	Savings and Loan Shares	Credit Union Shares & Deposits
1970	$25,370.1	$ 7,092.3	$12,770.7	$ 4,193.4	$1,313.7
1971	28,743.7	7,841.7	14,413.3	5,001.7	1,487.0
1972	32,002.6	8,555.2	15,754.5	6,029.8	1,663.1
1973	34,991.7	9,127.5	17,210.3	6,747.8	1,906.1
1974	37,214.7	9,187.0	18,655.7	7,320.0	2,052.0
1975	39,987.8	9,116.7	19,950.6	8,625.5	2,295.0
1976	43,567.2	9,084.7	21,873.4	10,175.0	2,434.0
1977	48,881.0	10,143.9	24,137.0	11,761.8	2,838.3
1978	54,303.9	11,246.6	26,648.7	13,248.6	3,160.0
1979	58,025.3	10,951.3	29,098.7	14,444.3	3,531.0
1980	61,251.8	10,662.7	31,047.3	15,937.0	3,604.8
1981[2]	62,260.0	8,700.0	33,800.0	16,000.0	3,760.0

[1]Individual, partnerships and corporate deposits only.
[2]Preliminary.

Source: Federal Deposit Insurance Corporation, the Michigan Credit Union League, and the Federal Home Loan Bank of Indianapolis.

TABLE C-22
Motor Vehicle Registrations, 1956-1981
(Thousands)

	Michigan				U.S.	
Year	Automobiles	Trucks and Buses	Total	Percent Change in Total	Total Motor Vehicle Registrations[1]	Michigan as Percent of U.S.
1956	2,747	391	3,138	0.8	65,183	4.81
1957	2,823	390	3,213	2.4	67,125	4.79
1958	2,717	392	3,109	-3.2	68,297	4.55
1959	2,796	405	3,201	3.0	71,354	4.49
1960	2,893	413	3,306	3.3	73,869	4.48
1961	2,938	417	3,354	1.5	75,958	4.42
1962	3,026	429	3,455	3.0	79,173	4.36
1963	3,161	439	3,600	4.2	82,714	4.35
1964	3,294	465	3,759	4.4	86,301	4.36
1965	3,497	494	3,991	6.2	90,361	4.42
1966	3,516	508	4,024	0.8	93,962	4.28
1967	3,587	546	4,133	2.7	96,931	4.26
1968	3,734	583	4,317	4.5	100,885	4.28
1969	3,873	615	4,488	4.0	105,097	4.26
1970	3,918	651	4,569	1.8	198,375	4.22
1971	4,052	687	4,740	3.7	112,922	4.20
1972	4,265	745	5,010	5.7	118,506	4.23
1973	4,436	804	5,240	4.6	125,420	4.18
1974	4,536	865	5,401	3.1	129,938	4.16
1975	4,628	918	5,546	2.7	132,951	4.17
1976	4,726	975	5,701	2.8	138,549	4.11
1977	4,954	1,032	5,986	5.0	143,747	4.16
1978	5,124	1,121	6,245	4.3	148,778	4.20
1979	5,093	1,248	6,341	1.5	154,118	4.11
1980	5,246	1,242	6,488	2.3	121,724	5.30
1981[2]	5,326	1,256	6,582	1.4	124,336	5.30

[1]This definition of motor vehicles includes only non-military automobiles, trucks, and buses.

[2]Estimate.

Source: *Motor Vehicle Facts and Figures*, Motor Vehicle Manufacturers of the U.S., Inc., selected issues.

TABLE C-23
New Passenger Car Sales in Michigan, 1964-1981[1]

Year	Number	Percent of U.S. Total	Year	Number	Percent of U.S. Total
1964	525,901	6.52	1973	664,505	6.62
1965	636,211	6.83	1974	513,129	5.89
1966	571,363	6.34	1975	496,476	6.01
1967	515,692	6.23	1976	606,979	6.22
1968	596,485	6.34	1977	664,122	6.18
1969	587,689	6.13	1978	669,700	6.12
1970	479,224	6.13	1979	611,443	6.68
1971	633,963	6.52	1980	449,487	5.13
1972	646,146	6.57	1981[2]	415,996	5.20

[1] Retail sales as measured by new car registrations.

[2] January through November data.

Source: *Automotive News*, Crain Automotive Group, Inc., selected issues. 1981 figure from R.L. Polk and Company. (Further reproduction of this number is prohibited.)

TABLE C-25
U.S. Motor Vehicle Production, 1960-1981

	Passenger Cars	Trucks and Buses	Total Motor Vehicles
1960	6,703,108	1,202,011	7,905,119
1961	5,522,019	1,130,919	6,652,938
1962	6,943,334	1,253,977	8,197,311
1963	7,644,337	1,464,399	9,108,776
1964	7,745,492	1,562,368	9,307,860
1965	9,335,227	1,802,603	11,137,830
1966	8,604,712	1,791,587	10,396,299
1967	7,412,659	1,611,077	9,023,736
1968	8,848,620	1,971,790	10,820,410
1969	8,224,392	1,981,519	10,205,911
1970	6,549,058	1,732,799	8,281,857
1971	8,580,311	2,085,959	10,666,270
1972	8,828,205	2,482,503	11,310,708
1973	9,667,152	3,014,432	12,681,584
1974	7,324,504	2,746,538	10,071,042
1975	6,717,064	2,264,575	8,981,639
1976	8,497,660	2,999,703	11,497,363
1977	9,191,377	3,473,626	12,665,003
1978	9,176,635	3,722,567	12,899,202
1979	8,434,150	3,046,586	11,480,736
1980	6,375,516	1,632,826	8,008,342
1981	6,270,783	1,672,648	7,943,431
1980: January	528,801	167,552	696,353
February	616,581	174,940	791,521
March	638,350	157,033	795,383
April	576,037	133,613	709,650
May	524,612	114,203	638,815
June	532,177	102,791	634,968
July	415,350	92,036	507,386
August	312,635	83,322	395,957
September	531,912	132,459	664,371
October	669,511	183,153	852,664
November	558,556	150,408	708,964
December	469,725	142,673	612,398
1981: January	482,284	144,284	626,568
February	482,074	132,921	614,995
March	625,620	163,869	789,489
April	653,863	153,941	807,804
May	666,399	159,400	825,799
June	712,633	177,921	890,554
July	497,151	124,618	621,769
August	396,393	89,065	485,458
September	452,257	125,902	578,159
October	534,832	156,411	691,243
November	415,303	114,765	530,567
December	351,475	129,551	481,026

Source: *Motor Vehicle Facts and Figures*, Motor Vehicle Manufacturers Association of the U.S. Inc., selected issues, 1981 figures supplied by Motor Vehicle Manufacturers Association of the U.S., Inc.

TABLE C-21
New Private Housing Units Authorized in Michigan SMSAs, 1976-1981

SMSA	1976	1977	1978	1979	1980	1981[1]
Ann Arbor	1,105	1,670	2,390	1,302	985	273
Battle Creek	961	845	781	831	742	240
Bay City	822	527	500	346	174	65
Detroit	18,214	24,672	26,409	20,050	9,824	5,517
Flint	1,861	3,282	3,277	2,281	1,244	626
Grand Rapids	3,811	4,563	5,832	4,123	2,627	1,922
Jackson	916	1,177	663	819	273	155
Kalamazoo-Portage	1,972	2,640	1,674	1,838	1,785	1,305
Lansing-East Lansing	2,509	3,800	3,455	3,986	2,206	1,675
Muskegon-Muskegon Heights	1,163	847	1,173	674	803	261
Saginaw	1,041	1,343	1,251	1,250	587	106

[1] Preliminary.

Source: "Housing Units Authorized by Building Permits and Public Contracts," *Construction Reports*, series C40, U.S. Department of Commerce, Bureau of the Census, 1975-1980.

TABLE C-24
State Share of Passenger Car Assemblies, 1967-1981 Model Years
(Percent of Total)

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
U.S. Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MICHIGAN	34.2	35.0	34.5	34.2	31.0	32.4	33.3	31.0	33.2	33.9	32.4	30.2	29.1	26.2	30.4
California	8.9	7.8	7.9	8.3	8.2	7.4	8.4	7.6	6.7	6.7	8.1	7.8	8.8	5.0	4.4
Delaware	4.7	4.8	4.5	6.1	4.5	4.6	4.4	3.8	3.5	4.9	4.0	5.6	5.4	6.3	8.0
Georgia	5.3	4.9	5.4	5.7	5.1	6.3	5.8	5.4	5.5	6.6	6.5	5.7	5.0	5.8	7.2
Illinois	4.3	4.5	4.5	3.3	5.8	4.8	4.4	4.0	4.6	3.5	4.5	5.0	5.6	5.8	6.0
Kansas	2.4	2.6	2.4	2.5	2.4	2.3	2.2	1.5	2.3	2.8	2.9	2.6	2.7	2.1	1.5
Kentucky	1.0	0.9	0.9	1.0	1.2	0.9	0.9	0.8	1.3	1.1	1.1	1.3	1.1	0.5	1.3
Maryland	2.1	2.4	2.3	2.7	1.9	2.2	2.3	2.9	3.3	3.1	2.6	2.4	2.6	2.0	1.6
Massachusetts	1.6	1.3	1.6	1.7	1.2	1.4	1.7	1.2	0.9	1.0	1.5	1.7	1.8	2.4	2.1
Minnesota	1.1	1.1	1.1	1.1	1.3	0.9	0.8	0.9	1.3	1.0	1.3	0.9	---	---	---
Missouri	9.3	10.1	10.5	11.2	11.2	9.8	10.1	11.2	9.8	9.2	11.1	11.9	11.1	8.2	7.9
New Jersey	7.0	5.6	5.6	5.5	6.7	7.1	6.3	6.5	6.5	6.8	6.6	6.1	6.5	7.1	5.6
New York	2.1	2.3	2.1	2.2	1.9	2.2	2.0	1.9	1.6	1.4	2.5	2.6	2.6	4.2	4.4
Ohio	6.7	7.2	7.5	6.4	8.8	9.6	9.0	10.8	10.4	8.7	7.3	9.8	8.9	9.5	4.3
Oklahoma	---	---	---	---	---	---	---	---	---	---	---	---	0.4	4.2	4.9
Pennsylvania	---	---	---	---	---	---	---	---	---	---	---	---	1.4	3.3	2.7
Texas	3.0	2.8	2.7	2.6	2.3	2.2	2.4	2.6	3.0	2.9	2.5	2.1	2.3	2.5	2.9
Virginia	0.7	0.9	0.7	0.8	0.6	0.5	0.5	0.3	---	---	---	---	---	---	---
Wisconsin	5.6	5.8	5.8	5.7	5.2	5.4	5.5	7.6	6.1	6.4	5.0	4.3	4.5	4.9	4.8

Source: *Ward's Automotive Reports*, Ward's Communications, Inc., selected issues.

TABLE C-26
U.S. Automobile Sales, Truck Sales, Inventories, and Stock, 1956-1981
(Thousands)

Year	U.S. Automobile Sales (Retail)	Domestic Nameplate Sales	Foreign Import Sales	Foreign Import Sales As Percent of U.S. Auto Sales	End of Year Inventory	U.S. Stock of Autos (Still in use)	Truck Retail Sales	U.S. Stock of Trucks
1956	6,007	5,909	98	1.6	512	49,804	927	9,544
1957	5,961	5,754	207	3.5	652	51,432	879	9,776
1958	4,575	4,204	371	8.1	544	52,492	731	10,057
1959	6,094	5,408	614	10.1	567	55,087	928	10,532
1960	6,637	6,139	498	7.5	841	57,103	925	10,803
1961	5,934	5,555	379	6.4	855	58,854	908	11,043
1962	7,093	6,752	341	4.8	841	60,920	1,068	11,463
1963	7,744	7,344	400	5.2	935	63,493	1,230	11,902
1964	8,098	7,614	484	6.0	923	66,051	1,352	12,445
1965	9,328	8,760	568	6.1	1,264	68,940	1,534	13,126
1966	9,024	8,373	651	7.2	1,309	71,264	1,614	14,357
1967	8,342	7,573	769	9.2	1,133	72,968	1,519	14,988
1968	9,638	8,607	1,031	10.7	1,467	75,385	1,805	15,685
1969	9,584	8,466	1,118	11.7	1,464	78,495	1,929	16,586
1970	8,383	7,116	1,267	15.1	1,220	80,448	1,746	17,688
1971	10,249	8,676	1,573	15.3	1,447	83,137	2,009	18,462
1972	10,944	9,322	1,622	14.8	1,310	86,439	2,531	19,773
1973	11,441	9,670	1,770	15.5	1,600	89,805	3,029	21,412
1974	8,867	7,451	1,395	16.0	1,655	92,608	2,587	23,312
1975	8,636	7,050	1,589	18.4	1,424	95,241	2,351	24,813
1976	10,100	8,607	1,493	14.8	1,465	97,818	3,044	26,560
1977	11,178	9,104	2,071	18.5	1,731	99,904	3,486	28,222
1978	11,308	9,308	2,000	17.7	1,729	102,957	3,914	30,565
1979	10,651	8,325	2,326	21.9	1,767	104,677	4,110	32,583
1980	8,973	6,578	2,395	26.7	1,448	104,564	3,480	35,268
1981	8,531	6,206	2,325	27.3	1,471	N.A.	2,257	N.A.

Source: *Automotive News*, Crain Automotive Group, Inc., selected issues. *Motor Vehicle Facts and Figures*, Motor Vehicle Manufacturers Association of the U.S., Inc.

TABLE C-27
U.S. and Michigan Motor Vehicle Industry Employment, Earnings, and Hours, 1956-1981

Year	MICHIGAN				UNITED STATES				Michigan Motor Vehicle Employment as Percent of U.S. Motor Vehicle Employment
	Number Employed (Thousands)	Average Weekly Earnings	Average Weekly Hours	Average Hourly Earnings	Number Employed (Thousands)	Average Weekly Earnings	Average Weekly Hours	Average Hourly Earnings	
1956	411.7	$ 97.68	40.4	$2.42	792.5	$ 96.82	41.2	$2.35	51.9
1957	387.7	100.47	39.6	2.54	769.3	100.61	40.9	2.46	50.4
1958	288.5	103.04	38.9	2.67	606.5	101.24	39.7	2.55	47.6
1959	303.4	115.60	40.7	2.84	692.3	111.38	41.1	2.71	43.8
1960	311.2	119.96	41.0	2.93	724.1	115.21	41.0	2.81	43.0
1961	268.4	117.18	39.3	2.98	632.3	114.69	40.1	2.86	42.4
1962	299.2	134.02	43.4	3.09	691.7	127.67	42.7	2.99	43.3
1963	315.8	141.68	43.9	3.23	741.3	132.68	42.8	3.10	42.6
1964	329.3	147.98	44.5	3.33	752.9	138.03	43.0	3.21	43.7
1965	364.5	159.85	46.2	3.46	842.7	147.63	44.2	3.34	43.3
1966	381.9	157.19	43.7	3.60	861.6	147.23	42.8	3.44	44.3
1967	361.8	155.29	41.6	3.73	815.8	144.84	40.8	3.55	44.3
1968	382.8	131.75	45.2	2.91	873.7	168.09	43.1	3.90	43.8
1969	398.7	178.74	42.1	4.25	911.4	170.56	41.6	4.10	43.7
1970	335.3	178.30	39.9	4.47	797.3	170.07	40.3	4.22	42.1
1971	353.6	209.54	41.6	5.04	842.1	194.46	41.2	4.72	42.0
1972	369.6	240.05	43.9	5.47	860.9	219.22	42.9	5.11	42.9
1973	401.0	258.07	44.8	5.76	955.3	238.06	43.6	5.46	42.0
1974	366.1	258.10	41.0	6.29	890.8	239.54	40.6	5.90	41.1
1975	321.2	286.98	41.7	6.88	774.1	262.68	40.6	6.46	41.5
1976	357.7	338.70	44.7	7.58	850.6	305.30	43.0	7.10	42.1
1977	386.5	382.46	45.0	8.50	947.3	345.40	44.0	7.85	40.8
1978	409.6	397.47	44.4	8.95	1,004.9	368.05	43.3	8.50	40.8
1979	392.7	411.80	41.6	9.90	990.4	372.37	41.1	9.06	39.7
1980	333.5	439.51	40.0	10.99	762.6	391.42	39.9	9.81	43.7
1981[1]	344.8	490.92	40.7	12.06	733.8	445.09	40.8	10.91	47.0

[1] Preliminary.

Source: U.S. Department of Labor and Michigan Employment Security Commission.

TABLE C-28
U.S. Automobile Price Indices, Personal Consumption Expenditures and Installment Credit, 1956-1981

Year	Wholesale Price Index Motor Vehicles and Equipment (1967=100)	Consumer Price Index New Cars (1967=100)	Consumer Price Index Used Cars (1967=100)	Personal Consumption Expenditures Auto and Parts (Billions)	Automobile Installment Credit (Millions) Extended	Repaid	Total Consumer Credit-Auto Paper
1956	91.2	93.5	69.1	$ 15.8	$15,515	$14,555	$ 14,420
1957	95.1	98.4	77.4	17.2	16,465	15,545	15,340
1958	98.1	101.5	80.2	14.8	14,226	15,415	14,152
1959	100.3	105.9	89.5	18.9	17,779	15,579	16,420
1960	98.8	104.5	83.6	19.7	17,657	16,419	17,658
1961	98.6	104.5	86.9	17.8	16,029	16,552	17,135
1962	98.6	104.1	94.8	21.5	19,694	17,447	19,381
1963	97.8	103.5	96.0	24.4	22,126	19,254	22,254
1964	98.3	103.2	100.1	26.1	24,046	21,369	24,934
1965	98.5	100.9	99.4	30.0	27,227	23,543	28,619
1966	98.6	99.1	97.0	30.4	27,341	25,404	30,556
1967	100.0	100.0	100.0	30.1	26,667	26,499	30,724
1968	102.8	102.8	102.6	36.3	31,424	28,018	34,130
1969	104.8	104.4	103.1	38.7	32,354	29,882	36,602
1970	108.5	107.6	104.3	36.2	29,791	30,137	35,184
1971	114.7	112.0	110.2	45.4	34,873	31,393	38,664
1972	118.0	111.0	110.5	52.4	40,194	34,729	44,129
1973	119.2	111.1	117.6	57.1	46,453	39,452	51,130
1974	128.2	117.5	122.6	50.4	45,429	44,929	52,871
1975	144.6	127.6	146.4	55.8	51,413	48,406	55,879
1976	153.7	135.7	167.9	72.6	62,988	52,750	66,116
1977	163.7	142.9	182.8	85.0	72,888	59,652	82,991
1978	175.0	153.8	186.5	94.3	87,981	69,245	101,647
1979	190.4	166.0	201.0	95.5	93,901	79,186	116,362
1980	208.7	179.3	208.1	89.9	83,002	83,037	116,327
1981	237.4	190.2	256.9	101.4[1]	92,303[1]	81,748[1]	126,882[1]

[1]Estimate.

Source: U.S. Department of Labor, Bureau of Labor Statistics; U.S. Department of Commerce, Bureau of Economic Analysis; and The Federal Reserve System, the Board of Governors.

TABLE C-29
U.S. Motor Vehicle Production and Auto Sales, Quarterly, 1973-1981
(Thousands)

Year: Quarter	U.S. Auto Production	U.S. Truck and Bus Production	Total Motor Vehicle Production	Domestic Auto Sales	Import Auto Sales	Total U.S. Auto Sales
1973: I	2,710	814	3,524	2,473	465	2,938
II	2,708	811	3,519	2,742	508	3,250
III	1,898	658	2,556	2,247	424	2,671
IV	2,352	731	3,083	2,208	375	2,583
1974: I	1,787	747	2,534	1,772	365	2,137
II	2,059	741	2,800	2,167	338	2,505
III	1,663	601	2,264	1,949	391	2,340
IV	1,816	658	2,474	1,562	301	1,863
1975: I	1,299	482	1,781	1,522	410	1,932
II	1,833	588	2,421	1,739	432	2,171
III	1,663	575	2,238	1,761	443	2,204
IV	1,922	620	2,542	2,028	304	2,332
1976: I	2,172	731	2,903	2,054	328	2,382
II	2,423	843	3,266	2,410	379	2,789
III	1,727	728	2,455	1,997	420	2,417
IV	2,176	697	2,873	2,145	367	2,512
1977: I	2,337	863	2,873	2,163	454	2,617
II	2,615	909	3,524	2,575	622	3,197
III	1,932	843	2,775	2,114	555	2,669
IV	2,307	858	3,165	2,253	440	2,693
1978: I	2,268	865	3,133	2,056	485	2,541
II	2,659	1,008	3,667	2,776	562	3,338
III	1,851	853	2,704	2,177	540	2,717
IV	2,398	996	3,394	2,299	413	2,712
1979: I	2,411	1,031	3,442	2,173	553	2,726
II	2,483	915	3,398	2,262	682	2,944
III	1,656	535	2,191	1,993	578	2,571
IV	1,884	565	2,449	1,892	512	2,404
1980: I	1,784	500	2,283	1,848	663	2,511
II	1,634	351	1,983	1,550	590	2,140
III	1,260	309	1,568	1,515	613	2,128
IV	1,698	476	2,174	1,665	529	2,194
1981: I	1,590	441	2,031	1,732	641	2,373
II	2,033	491	2,524	1,576	633	2,209
III	1,346	340	1,686	1,617	576	2,193
IV	1,302	401	1,703	1,280	475	1,755

Source: Motor Vehicle Manufacturers Association of the U.S. *Automotive News*, Crain Automotive Group, Inc., selected issues.

TABLE C-30
Rate Changes Granted to Regulated Michigan Utilities in 1981

TELEPHONE COMPANIES	
Augusta Telephone	$ 57,164
Barry County Telephone	92,500
Bloomingdale Telephone	44,325
Carr Telephone	61,184
Continental Telephone	1,499,076
General Telephone of Michigan	7,148,000
Mesick Telephone	35,054
Michigan Bell Telephone	115,000,000
Total	$123,937,303
ELECTRIC COMPANIES	
Alger Delta Cooperative Electric Association	$ 242,886
Alpena Power	771,287
Cherryland Rural Electric Cooperative Association	492,034
Cloverland Electric Cooperative	598,828
Consumers Power	140,381,090
Detroit Edison	202,699,587
Edison Sault Electric	419,564
Fruit Belt Electric Cooperative	747,000
Indiana & Michigan Electric	3,779,287
Michigan Power	(59,000)
Northern Michigan Electric Cooperative, Inc.	1,389,639
Oceana Electric Cooperative	350,906
Ontonagon County Rural Electrification Association	79,706
Presque Isle Electric Cooperative	1,233,109
Southeastern Michigan Rural Electric Cooperative, Inc.	127,275
Thumb Electric Cooperative of Michigan	378,413
Top O'Michigan Rural Electric	1,555,082
Tri-County Electric Cooperative	618,000
Upper Peninsula Power	2,738,473
Western Michigan Electric Cooperative	406,600
Wolverine Electric Cooperative	1,867,000
Total	$360,816,766
GAS COMPANIES	
Consumers Power	$ 76,736,000
Michigan Consolidated Gas	35,009,000
Michigan Gas Utilities	1,227,426
Michigan Power	3,146,868
Peninsular Gas	225,304
Southeastern Michigan Gas	4,371,000
Total	$120,715,598
STEAM COMPANIES	
Detroit Edison	$ 927,000
WATER COMPANIES	
Northern Michigan Water	$ 108,779
GRAND TOTAL	$606,505,446

Source: Michigan Department of Commerce, Public Service Commission.

TABLE C-33
Number of Farms, Average Size, and Land in Farms in Michigan, 1951-1982

Year	Number of Farms	Average Size (acres)	Land in Farms (acres)
1951	156,000	113	17,700,000
1952	151,000	116	17,500,000
1953	146,000	118	17,300,000
1954	135,000	123	16,600,000
1955	138,000	122	16,900,000
1956	135,000	120	16,600,000
1957	132,000	123	16,300,000
1958	127,000	126	16,000,000
1959	123,000	128	15,700,000
1960	118,000	131	15,400,000
1961	114,000	132	15,100,000
1962	110,000	135	14,800,000
1963	106,000	138	14,600,000
1964	102,000	141	14,400,000
1965	98,000	144	14,100,000
1966	95,000	146	13,900,000
1967	92,000	148	13,600,000
1968	89,000	149	13,300,000
1969	86,000	150	12,900,000
1970	84,000	151	12,700,000
1971	82,000	152	12,500,000
1972	81,000	152	12,300,000
1973	78,000	154	12,000,000
1974	76,000	154	11,700,000
1975	70,000	164	11,500,000
1976	70,000	163	11,400,000
1977	68,000	168	11,400,000
1978	66,000	173	11,400,000
1979	66,000	173	11,400,000
1980	66,000	173	11,400,000
1981	65,000	175	11,400,000
1982	66,000	174	11,500,000

Source: Michigan Department of Agriculture, based on U.S. Census of Agriculture.

TABLE C-34
U.S. and Michigan Resident Population,
July 1, 1950 - July 1, 1981
(Thousands)

Year	Michigan Population	U.S. Population	Michigan as a percent of U.S.
1950	6,407	151,868	4.22
1951	6,497	153,982	4.22
1952	6,650	156,393	4.25
1953	6,822	158,956	4.29
1954	7,066	161,884	4.36
1955	7,285	165,069	4.41
1956	7,465	168,088	4.44
1957	7,569	171,187	4.42
1958	7,667	174,149	4.40
1959	7,767	177,135	4.38
1960	7,834	179,975	4.35
1961	7,893	182,973	4.32
1962	7,933	185,738	4.27
1963	8,058	188,438	4.28
1964	8,187	191,095	4.28
1965	8,357	193,460	4.32
1966	8,512	195,501	4.35
1967	8,630	197,374	4.37
1968	8,696	199,312	4.36
1969	8,781	201,306	4.36
1970	8,901	203,805	4.37
1971	8,972	206,827	4.34
1972	9,025	209,284	4.31
1973	9,072	211,357	4.29
1974	9,109	213,342	4.26
1975	9,108	215,465	4.23
1976	9,117	217,563	4.19
1977	9,157	219,760	4.16
1978	9,202	222,095	4.14
1979	9,249	224,567	4.12
1980	9,262	226,505	4.09
1981[1]	9,275	229,304	4.04

[1] Provisional estimates.

Sources: Current Population Reports, Series P-25, Nos. 304, 376, 380, 460, 468, Department of Commerce, Bureau of the Census. The figures for 1971 through 1979 were revised by U.S. Department of Commerce, Bureau of the Census. Figure for 1981 is prepared by Michigan Department of Management and Budget.

TABLE C-31
Prices Received by Michigan Farmers, 1969-1981

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
						Market Year Averages							
Corn (per bushel)	$ 1.14	$ 1.32	$ 1.03	$ 1.49	$ 2.52	$ 2.91	$ 2.35	$ 2.38	$ 1.93	$ 2.05	$ 2.38	$ 2.66	$ 2.86
Wheat (per bushel)	1.20	1.40	1.34	1.67	4.30	3.64	3.10	2.87	2.12	3.01	3.61	3.78	3.46
Oats (per bushel)	.59	.70	.71	.84	1.35	1.65	1.40	1.47	1.50	1.32	1.36	1.72	2.09
Soybeans (per bushel)	2.33	2.84	3.05	4.60	5.73	6.28	4.50	5.51	6.71	6.16	6.77	6.58	6.71
Dry Beans (per cwt.)	6.30	9.70	11.50	9.70	27.30	14.80	29.30	18.69	16.51	16.88	16.48	20.97	30.08
Potatoes (per cwt.)	2.71	2.72	2.47	3.66	6.13	4.15	6.03	5.23	5.76	4.64	4.82	6.42	9.23
Hay (baled, per ton)	22.00	22.50	28.50	29.50	31.00	39.00	43.50	46.68	52.67	54.42	40.83	36.08	44.38
						Calendar Year Averages							
Hogs (per cwt.)	$22.40	$22.90	$17.90	$25.50	$39.50	$35.80	$49.04	$44.10	$40.80	$47.87	$42.83	$39.38	$43.28
Beef Cattle (per cwt.)	24.20	25.80	26.40	30.50	40.20	34.60	33.37	33.28	33.06	45.57	60.29	55.68	49.68
Veal Calves (per cwt.)	32.00	37.60	40.30	49.70	62.40	46.50	30.20	34.68	38.92	62.61	94.12	82.10	65.38
Lambs (per cwt.)	27.20	27.20	26.60	29.50	36.60	38.70	42.82	46.89	51.78	62.30	66.49	62.62	52.64
Milk (wholesale, per cwt.)	5.58	5.81	5.96	6.17	7.18	8.20	8.57	9.85	9.66	10.49	12.08	13.17	13.85
Turkeys (per lb.)	.22	.24	.24	.23	.36	.29	.30	.30	.35	.46	.46	.43	.41
Eggs (per doz.)	.37	.36	.27	.26	.50	.48	.46	.54	.49	.47	.50	.48	.54
Wool (per lb.)	.37	.37	.25	.29	.63	.37	.25	.47	.64	.65	.68	.70	.66

Source: *Agricultural Prices*, U.S. Department of Agriculture, Crop Reporting Board. *Agriculture Across Michigan*, U.S. Department of Agriculture and Michigan Department of Agriculture.

TABLE C-32
Michigan Farm Income Components, 1966-1981
(Millions)

Year	Realized Gross Farm Income: Cash Receipts From Farm Marketings	Realized Gross Farm Income: Government Payments	Realized Gross Farm Income: Non-Money Income	Realized Gross Farm Income: Other Farm Income	Realized Gross Farm Income: Total	Farm Production Expenses	Net Changes in Farm Inventories	Net Farm Income[2]
1966	$ 876.9	$62.2	$104.8	$ 9.3	$1,053.2	$ 728.6	$-15.5	$309.0
1967	850.2	56.0	108.6	10.2	1,025.0	768.7	-18.6	237.7
1968	849.1	65.3	110.0	10.3	1,034.7	789.9	1.0	245.8
1969	888.2	73.4	117.1	10.5	1,089.1	799.5	6.0	295.6
1970	910.1	65.7	114.8	10.2	1,100.8	847.8	20.9	273.9
1971	974.3	52.5	116.5	12.0	1,155.3	885.4	-27.9	242.0
1972	1,039.1	61.2	126.7	12.4	1,239.3	936.0	58.4	361.7
1973	1,500.1	38.9	151.1	15.2	1,705.3	1,112.6	-91.7	500.9
1974	1,651.8	10.4	172.7	18.4	1,853.5	1,355.9	64.2	561.7
1975	1,647.7	13.3	184.9	22.9	1,868.8	1,437.0	58.2	489.9
1976	1,723.9	7.3	199.7	25.1	1,955.9	1,554.6	-35.2	366.1
1977	1,823.7	21.2	246.1	28.6	2,119.6	1,662.0	14.6	397.0
1978	2,126.8	45.5	254.3	31.6	2,458.2	1,870.6	-33.5	554.1
1979	2,361.5	15.6	296.8	40.6	2,714.6	2,225.4	98.4	587.6
1980[1]	2,693.6	10.7	339.9	42.3	3,086.5	2,611.9	40.9	515.4
1981[1]	2,906.5	N.A.	N.A.	N.A.	N.A.	2,826.0	N.A.	415.0

[1] Estimate.

[2] Net farm income reported by the U.S. Department of Agriculture does not always agree with that reported by the U.S. Department of Commerce, Bureau of Economic Analysis.

Source: U.S. Department of Agriculture, Economic Research Service.

Table C-35
Michigan Population by County, 1970-1980

	1980 Census	1970 Census	Change 1970-80		Components of Change			
			Number	Percent	Birth[1]	Deaths[1]	Net Migration Number	Net Migration Rate
Michigan Total	9,262,078	8,881,826	380,252	4.28	1,440,182	759,956	-299,974	-3.38
Alcona	9,740	7,113	2,627	36.93	1,026	1,146	2,747	38.62
Alger	9,225	8,568	657	7.67	1,322	1,033	369	4.30
Allegan	81,555	66,575	14,980	22.50	12,286	6,038	8,732	13.12
Alpena	32,315	30,708	1,607	5.23	4,885	2,700	-577	-1.88
Antrim	16,194	12,612	3,582	28.40	2,268	1,647	2,961	23.48
Arenac	14,706	11,149	3,557	31.9[illegible]	2,060	1,421	2,919	26.18
Baraga	8,484	7,789	695	8.92	1,323	1,004	376	4.82
Barry	45,781	38,166	7,615	19.95	6,409	3,589	4,794	12.56
Bay	119,881	117,339	2,542	2.17	19,183	9,706	-6,935	-5.91
Benzie	11,205	8,593	2,612	30.40	1,427	1,221	2,407	28.01
Berrien	171,276	163,940	7,336	4.47	29,338	15,414	-6,588	-4.02
Branch	40,188	37,906	2,282	6.02	6,021	3,784	45	.12
Calhoun	141,557	141,963	-406	-.29	22,600	12,946	-10,061	-7.09
Cass	49,499	43,312	6,187	14.28	7,137	4,058	3,108	7.18
Charlevoix	19,907	16,541	3,366	20.35	2,907	1,859	2,318	14.01
Cheboygan	20,649	16,573	4,076	24.59	3,052	2,004	3,028	18.27
Chippewa	29,029	32,412	-3,383	-10.44	6,379	2,967	-6,805	-21.00
Clare	23,822	16,695	7,127	42.69	2,872	2,353	6,608	39.58
Clinton	55,893	48,492	7,401	15.26	8,185	3,229	2,445	5.04
Crawford	9,465	6,482	2,983	46.02	1,293	853	2,542	39.22
Delta	38,947	35,924	3,023	8.41	5,993	4,055	1,085	3.02
Dickinson	25,341	23,753	1,588	6.69	3,305	3,066	1,349	5.68
Eaton	88,337	68,892	19,445	28.23	11,307	5,065	13,203	19.16
Emmet	22,992	18,331	4,661	25.43	3,183	2,028	3,506	19.13
Genesee	450,449	445,589	4,860	1.09	78,036	32,681	-40,495	-9.09
Gladwin	19,957	13,471	6,486	48.15	2,387	1,754	5,853	43.45
Gogebic	19,686	20,676	-990	4.79	2,513	3,041	-462	-2.23
Grand Traverse	54,899	39,175	15,724	40.14	7,440	3,910	12,194	31.13
Gratiot	40,448	39,246	1,202	3.06	6,740	3,579	-1,959	-4.99
Hillsdale	42,071	37,171	4,900	13.18	6,214	3,655	2,341	6.30
Houghton	37,872	34,652	3,220	9.29	5,033	4,755	2,942	8.49
Huron	36,459	34,083	2,376	6.97	5,626	4,105	855	2.51
Ingham	275,520	261,039	14,481	5.55	44,506	16,522	-13,503	-5.17

Table C-35 (Continued)
Michigan Population by County, 1970-1980

	1980 Census	1970 Census	Change 1970-80 Number	Change 1970-80 Percent	Components of Change: Birth[1]	Components of Change: Deaths[1]	Components of Change: Net Migration Number	Components of Change: Net Migration Rate
Ionia	51,815	45,848	5,967	13.01	8,434	4,199	1,733	3.78
Iosco	28,349	24,905	3,444	13.83	5,487	2,566	522	2.10
Iron	13,635	13,813	-178	-1.29	1,529	2,109	402	2.91
Isabella	54,110	44,594	9,516	21.34	7,162	3,013	5,367	12.04
Jackson	151,495	143,274	8,221	5.74	22,559	12,712	-1,626	-1.14
Kalamazoo	212,378	201,550	10,828	5.37	30,173	13,922	-5,423	-2.69
Kalkaska	10,952	5,372	5,580	103.87	1,519	913	4,974	92.58
Kent	444,506	411,044	33,462	8.14	70,882	34,662	-2,759	-.67
Keweenaw	1,963	2,264	-301	-13.30	271	352	-219	-9.68
Lake	7,711	5,661	2,050	36.21	970	1,102	2,182	38.54
Lapeer	70,038	52,361	17,677	33.76	10,432	4,447	11,691	22.33
Leelanau	14,007	10,872	3,135	28.84	1,627	1,225	2,733	25.14
Lenawee	89,948	81,951	7,997	9.76	14,657	7,277	617	.75
Livingston	100,289	58,967	41,322	70.08	11,569	5,001	34,754	58.94
Luce	6,659	6,789	-130	-1.91	1,024	738	-416	-6.13
Mackinac	10,178	9,660	518	5.36	1,455	1,148	211	2.18
Macomb	694,600	626,204	68,396	10.92	96,355	40,065	12,106	1.93
Manistee	23,019	20,393	2,626	12.88	2,903	2,626	2,349	11.52
Marquette	74,101	64,686	9,415	14.55	12,781	5,380	2,014	3.11
Mason	26,365	22,612	3,753	16.60	3,493	2,604	2,864	12.66
Mecosta	36,961	27,992	8,969	32.04	4,680	2,446	6,736	24.06
Menominee	26,201	24,587	1,614	6.56	3,538	2,820	897	3.65
Midland	73,578	63,769	9,809	15.38	11,222	4,001	2,588	4.06
Missaukee	10,009	7,126	2,883	40.46	1,443	885	2,326	32.63
Monroe	134,659	119,215	15,444	12.95	20,130	8,970	4,285	3.59
Montcalm	47,555	39,660	7,895	19.91	7,574	4,420	4,741	11.95
Montmorency	7,492	5,247	2,245	42.79	947	841	2,139	40.77
Muskegon	157,589	157,426	163	.10	25,745	13,599	-11,983	-7.61
Newaygo	34,917	27,992	6,925	24.74	5,024	3,142	5,043	18.01
Oakland	1,011,793	907,871	103,922	11.45	137,088	65,304	32,139	3.54
Oceana	22,002	17,984	4,018	22.34	3,473	2,077	2,622	14.58
Ogemaw	16,436	11,903	4,533	38.08	2,114	1,834	4,253	35.73
Ontonagon	9,861	10,548	-687	-6.51	1,590	1,227	-1,051	-9.96
Osceola	18,928	14,838	4,090	27.56	2,901	1,852	3,041	20.49
Oscoda	6,858	4,726	2,132	45.11	762	781	2,151	45.51

TABLE C-36
U.S. Population, Ranked by State, 1980

Rank	State	1980 Census[1]	Rank	State	1980 Census[1]
	United States	226,504,825			
1	California	23,668,562	26	Oklahoma	3,025,266
2	New York	17,557,288	27	Iowa	2,913,387
3	Texas	14,228,383	28	Colorado	2,888,834
4	Pennsylvania	11,866,728	29	Arizona	2,717,866
5	Illinois	11,418,461	30	Oregon	2,632,663
6	Ohio	10,797,419	31	Mississippi	2,520,638
7	Florida	9,739,992	32	Kansas	2,363,208
8	Michigan	9,262,078	33	Arkansas	2,285,513
9	New Jersey	7,364,158	34	West Virginia	1,949,644
10	North Carolina	5,874,429	35	Nebraska	1,570,006
11	Massachusetts	5,737,037	36	Utah	1,461,037
12	Indiana	5,490,179	37	New Mexico	1,299,968
13	Georgia	5,464,265	38	Maine	1,124,660
14	Virginia	5,346,279	39	Hawaii	965,000
15	Missouri	4,917,444	40	Rhode Island	947,154
16	Wisconsin	4,705,335	41	Idaho	943,935
17	Tennessee	4,590,750	42	New Hampshire	920,610
18	Maryland	4,216,446	43	Nevada	799,184
19	Louisiana	4,203,972	44	Montana	786,690
20	Washington	4,130,163	45	South Dakota	690,178
21	Minnesota	4,077,148	46	North Dakota	652,695
22	Alabama	3,980,061	47	Delaware	595,225
23	Kentucky	3,661,433	48	Vermont	511,456
24	South Carolina	3,119,208	49	Wyoming	470,816
25	Connecticut	3,107,576	50	Alaska	400,481

[1] Preliminary.

Source: U.S. Department of Commerce, Bureau of the Census.

Table C-35 (Continued)
Michigan Population by County, 1970-1980

	1980 Census	1970 Census	Change 1970-80		Components of Change			
			Number	Percent	Birth[1]	Deaths[1]	Net Migration Number	Net Migration Rate
Otsego	14,993	10,422	4,571	43.86	2,205	1,067	3,434	32.94
Ottawa	157,174	128,181	28,993	22.62	23,300	9,110	14,804	11.55
Presque Isle	14,267	12,836	1,431	11.15	2,056	1,342	717	5.58
Roscommon	16,374	9,892	6,482	65.53	1,690	1,838	6,629	67.02
Saginaw	228,059	219,743	8,316	3.78	39,289	17,738	13,234	-6.02
St. Clair	138,802	119,280	19,522	16.37	20,861	12,350	11,011	9.23
St. Joseph	56,083	47,392	8,691	18.34	8,866	4,948	4,774	10.07
Sanilac	40,789	35,181	5,608	15.94	6,070	4,085	3,624	10.30
Schoolcraft	8,575	8,226	349	4.24	1,301	1,109	157	1.91
Shiawassee	71,140	63,076	8,065	12.79	11,780	5,189	1,475	2.34
Tuscola	56,961	48,603	8,358	17.20	8,846	4,495	4,007	8.24
Van Buren	66,814	56,173	10,641	18.94	10,401	5,928	6,168	10.98
Washtenaw	264,748	234,103	30,645	13.09	37,715	13,067	5,996	2.56
Wayne	2,337,891	2,670,368	-332,477	-12.45	404,359	247,901	-488,935	-18.31
Wexford	25,102	19,717	5,385	27.31	3,687	2,362	4,061	20.59

[1]The numbers of births and deaths are derived from the reported vital statistics released by the Michigan Department of Public Health between 1970 and 1980. Three quarters of the 1970 resident births and deaths are used as the period between April 1, 1970 through December 31, 1970. One quarter of the 1980 resident births and deaths are used as the period between January 1, 1980 and March 31, 1980.

Source: U.S. Department of Commerce, Bureau of the Census.

TABLE C-37
Michigan School Enrollment Grades K-12, 1974-1986[1]

Year		Kinder-garten	Change From Last Period	Grades 1-6	Change From Last Period	Grades 7-9	Change From Last Period	Grades 10-12	Change From Last Period	Grades K-12	Change From Last Period
1973-74	Public	153,834	-5,310	944,929	-29,146	516,036	-2,485	473,912	2,145	2,088,701	-34,796
	Non-Public	5,842	677	114,744	-4,047	55,080	-699	38,609	-247	214,275	-4,316
	TOTAL	159,666	-4,633	1,059,673	-33,193	571,116	-3,184	512,521	1,898	2,302,976	-39,112
1974-75	Public	155,987	2,163	914,108	-30,821	512,494	-3,542	473,860	-52	2,056,449	-32,252
	Non-Public	6,871	1,029	109,379	-5,365	54 362	-418	38,654	45	209,566	-4,709
	TOTAL	162,858	3,192	1,023,487	-36,186	567,156	-3,960	512,514	-7	2,266,015	-36,961
1975-76	Public	159,981	3,994	884,786	-29,322	506,107	-6,387	475,334	1,474	2,026,208	-30,241
	Non-Public	8,825	1,934	107,936	-1,443	53,181	-1,481	38,750	96	208,692	-874
	TOTAL	168,806	5,948	992,722	-30,765	559,288	-7,868	514,084	1,570	2,234,900	-31,115
1976-77	Public	152,790	-7,191	866,756	-18,030	496,190	-9,917	473,452	-1,882	1,989,188	-37,020
	Non-Public	9,937	1,112	109,287	1,351	52,943	-238	38,686	-64	210,853	2,161
	TOTAL	162,727	-6,079	976 043	-16,679	549,133	-10,155	512,138	-1,946	2,200,041	-34,859
1977-78	Public	136,843	-15,947	852,650	-14,106	479,150	-17,040	460,862	-12,590	1,929,505	-59,683
	Non-Public	9,882	-55	108,107	-1,180	51,896	-1,047	38,795	109	208,680	-2,173
	TOTAL	146,725	-16,002	960,757	-15,286	531,046	-18,087	499,657	-12,481	2,138,185	-61,856
1978-79	Public	129,592	-7,251	832,229	-20,421	457,555	-21,595	450,435	-10,427	1,869,811	-59,694
	Non-Public	10,166	284	105,507	-2,600	49,558	-2,338	38,249	-546	203,480	-5,200
	TOTAL	139,758	-6,967	937,736	-23,021	507,113	-23,933	488,684	-10,973	2,073,291	-64,894
1979-80	Public	125,196	-4,396	808,981	-23,248	435,955	-21,600	434,526	-15,909	1,804,658	-65,153
	Non-Public	11,172	1,006	103,747	-1,760	4[illegible],244	-1,314	37,966	-283	201,129	-2,351
	TOTAL	136,368	-3,390	912,728	-25,008	4[illegible],199	-21,914	472,492	-16,192	2,005,787	-67,504
1980-81[2]	Public	122,425	-2,771	782,405	-26,576	418,929	-17,026	419,920	-14,606	1,743,679	-60,979
	Non-Public	11,950	778	104,341	594	47,575	-669	37,672	-294	201,538	409
	TOTAL	134,375	-1,993	886,746	-25,982	466,504	-17,695	457,592	-14,900	1,945,217	-60,570
1981-82[2]	Public	120,026	-2,399	756,661	-25,744	410,901	-8,028	400,102	-19,818	1,687,690	-55,989
	Non-Public	11,810	-140	104,072	-269	46,781	-794	37,120	-552	199,783	-1,755
	TOTAL	131,836	-2,539	860,733	-26,013	457,682	-8,822	437,222	-20,370	1,887,473	-57,744

TABLE C-37 (Continued)
Michigan School Enrollment Grades K-12, 1974-1986[1]

Year	Kinder-garten	Change From Last Period	Grades 1-6	Change From Last Period	Grades 7-9	Change From Last Period	Grades 10-12	Change From Last Period	Grades K-12	Change From Last Period
1982-83[2] Public	126,456	6,430	724,423	-32,238	412,884	1,983	380,096	-20,006	1,643,859	-43,831
Non-Public	12,443	633	102,338	-1,734	47,679	898	36,309	-811	198,769	-1,014
TOTAL	138,899	7,063	826,761	-33,972	460,563	2,881	416,405	-20,817	1,842,628	-44,845
1983-84[2] Public	126,809	353	703,657	-20,766	413,883	999	366,630	-13,466	1,610,979	-32,880
Non-Public	12,478	35	102,045	-293	48,235	556	35,685	-624	198,443	-326
TOTAL	139,287	388	805,702	-21,059	462,118	1,555	402,315	-14,090	1,809,422	-33,206
1984-85[2] Public	131,971	5,162	695,029	-8,628	402,145	-11,738	360,279	-6,351	1,589,424	-21,555
Non-Public	12,986	508	102,952	907	47,522	-713	35,062	-623	198,522	79
TOTAL	144,957	5,670	797,981	-7,721	449,667	-12,451	395,341	-6,974	1,787,946	-21,476
1985-86[2] Public	132,016	45	697,967	2,938	378,754	-23,391	362,979	2,700	1,571,716	-17,708
Non-Public	12,990	4	104,756	1,804	45,875	-1,647	35,678	616	199,299	777
TOTAL	145,006	49	802,723	4,742	424,629	-25,038	398,657	3,316	1,771,015	-16,931

[1]Excludes special education and part-time students.

[2]Projected enrollments are derived from Stanley E. Hecker and Frederick R. Ignatovich, *Michigan Total, Public, and Non-public Membership Projections*, Michigan State University, Department of Administration and Higher Education, August 13, 1981.

Source: Michigan Department of Education.

TABLE C-34
Michigan Elementary, Secondary, and Higher Education Student Enrollments, 1966-1982

School Year	Elementary[1] Public	Elementary[1] Private	Secondary[2] Public	Secondary[2] Private	Total K-12 Public	Total K-12 Private	Total K-12 Public and Private	Percent Change Public	Percent Change Private	Percent Change Public and Private
1965-66	1,163,749	219,293	804,664	145,793	1,968,413	365,086	2,333,499	2.6	-1.1	2.0
1966-67	1,186,590	212,284	847,392	141,150	2,033,982	353,444	2,387,426	3.3	-3.2	2.3
1967-68	1,195,151	202,150	884,553	136,317	2,079,704	338,467	2,418,711	2.2	-4.2	1.3
1968-69	1,200,083	190,609	922,836	121,693	2,122,919	312,303	2,435,222	2.1	-7.7	0.7
1969-70	1,205,193	171,413	959,193	124,896	2,164,386	296,309	2,460,695	2.0	-5.2	1.0
1970-71	1,200,624	200,344	978,121	74,084	2,178,745	274,428	2,453,173	0.7	-7.4	-0.3
1971-72	1,201,522	127,043	1,010,983	96,793	2,212,505	223,836	2,436,341	1.5	-18.4	-0.7
1972-73	1,168,731	126,431	1,024,539	94,811	2,193,270	221,242	2,414,512	-0.9	-1.2	-0.9
1973-74	1,132,474	121,584	1,025,401	93,718	2,157,875	215,302	2,373,177	-1.6	-2.7	-1.7
1974-75	1,103,770	117,023	1,033,493	93,324	2,137,263	210,347	2,347,610	-1.0	-2.3	-1.1
1975-76	1,082,797	117,713	1,045,120	91,805	2,127,917	209,518	2,337,435	-0.4	-0.4	-0.4
1976-77	1,019,546	160,445	1,062,390	54,653	2,081,936	215,098	2,297,034	-2.2	2.7	-1.7
1977-78	989,493	117,989	1,035,673	93,951	2,025,166	211,940	2,237,103	-2.7	-1.5	-2.6
1978-79	1,003,355	116,213	962,802	87,846	1,966,157	204,059	2,170,216	-2.9	-3.7	-3.0
1979-80	979,492	122,539	931,842	85,261	1,911,334	208,800	2,120,134	-2.8	2.3	-2.3
1980-81	904,830	116,291	838,849	85,247	1,743,679	201,538	1,945,217	-8.8	-3.5	-8.3

School Year	Public Higher Education Two-Year	Public Higher Education Four-Year	Public Higher Education Total	Public Higher Education Percent Change	Private Higher Education Total	Private Higher Education Percent Change	Total Higher Education	Percent Change
1965-66	58,216	162,312	220,528	16.5	47,896	10.2	268,424	15.3
1966-67	69,498	176,487	245,983	11.5	49,462	3.3	295,445	10.1
1967-68	79,698	187,708	267,406	8.7	50,461	2.0	317,867	7.6
1968-69	95,965	198,419	294,384	10.1	50,777	0.6	345,161	8.6
1969-70	115,299	208,323	323,622	9.9	50,759	-0.0	374,381	8.5
1970-71	125,533	217,802	343,355	6.1	52,348	3.1	395,703	5.7
1971-72	132,059	220,165	352,224	2.6	52,928	1.1	405,152	2.3
1972-73	136,611	218,724	355,335	0.9	50,593	-4.4	405,928	0.2
1973-74	152,715	221,893	374,608	5.4	51,160	1.1	425,768	4.9
1974-75	173,643	229,627	403,270	7.7	55,273	8.0	458,543	7.7
1975-76	197,199	240,442	437,641	8.5	61,081	10.5	498,722	8.8
1976-77	187,622	236,831	424,453	-3.0	60,372	-1.2	484,825	-2.8
1977-78	186,876	236,618	423,494	-0.2	61,906	2.5	485,400	0.1
1978-79	187,649	236,035	423,684	0.1	62,810	1.5	486,494	0.2
1979-80	231,915	240,600	450,154	6.3	64,333	2.4	514,487	5.8
1980-81	244,971	242,999	487,970	8.4	66,216	2.9	554,186	7.7
1981-82	211,871	235,027	446,897	-8.4	68,406	3.3	515,303	-7.0

[1]Includes grades K-6 and special education students.

[2]Includes grades 7-12 and part-time students.

Source: Michigan Department of Education and Michigan Department of Management and Budget.

TABLE C-39
Michigan Real and Personal Property Values, Taxes, and Tax Rates, 1952-1981
(Thousands)

Year	Assessed Valuation	County Equalized Valuations	State Equalized Valuations	Tax Levy		Average Tax Rate	
				Amount	Percent Change[1]	Mills	Percent Change[1]
1952	$11,531,377	$12,293,598	$13,634,300	$ 409,289	9.1	30.02	-7.9
1953	12,094,392	13,059,429	15,720,900	443,292	8.3	28.20	-6.1
1954	12,782,605	13,910,137	16,722,075	496,501	12.2	29.69	5.3
1955	13,481,826	15,505,027	17,551,275	563,871	13.5	32.13	8.2
1956	14,530,579	17,044,209	18,957,624	621,839	10.3	32.80	2.1
1957	15,452,973	18,511,832	21,602,319	710,464	14.1	32.89	0.3
1958	15,926,183	19,501,399	22,153,627	741,260	4.4	33.46	1.7
1959	16,126,254	19,883,366	22,438,384	786,649	6.2	35.06	4.8
1960	16,629,847	20,811,250	24,870,342	851,180	8.1	34.22	-2.4
1961	16,784,842	22,422,661	25,202,552	874,775	2.8	34.71	1.4
1962	16,984,435	22,802,732	25,182,559	891,307	1.8	35.39	2.0
1963	17,190,129	23,211,055	25,797,485	934,869	4.9	36.24	2.4
1964	17,694,863	24,053,734	26,350,184	991,234	6.0	37.62	3.8
1965	18,370,770	24,743,771	27,080,518	1,038,623	4.8	38.35	1.9
1966	20,483,070	27,905,044	28,206,349	1,129,224	8.7	40.03	4.4
1967	24,260,128	29,807,504	29,891,295	1,288,682	14.1	43.11	7.7
1968	27,702,241	32,012,879	32,041,173	1,474,994	14.5	46.03	6.8
1969	30,079,712	35,083,860	35,101,273	1,660,861	12.6	47.32	2.8
1970	32,954,101	38,553,759	38,551,587	1,874,291	12.9	48.62	2.7
1971	36,593,349	41,562,933	41,648,959	2,063,280	10.1	49.54	1.9
1972	39,814,568	44,347,772	44,487,728	2,183,224	5.8	49.07	-0.9
1973	42,648,458	47,492,752	47,612,674	2,420,403	10.9	50.84	3.6
1974	47,269,245	51,747,552	51,871,329	2,649,594	9.5	51.08	0.5
1975	51,148,731	55,802,269	56,800,875	2,903,906	9.6	51.12	0.1
1976	49,905,386	54,272,820	55,478,935	2,960,724	2.0	53.37	4.4
1977	53,867,947	59,305,512	59,512,999	3,207,096	8.3	53.89	0.9
1978	58,353,692	64,724,020	64,863,929	3,484,874	8.7	53.73	-0.3
1979	64,169,123	72,449,469	72,527,956	3,890,996	11.7	53.64	-0.2
1980	71,724,587	82,087,269	82,646,050	4,414,952	13.5	53.42	-0.4
1981[2]	80,256,048	91,930,689	92,059,135	4,909,514	11.2	53.34	-0.2

[1]From previous year.
[2]Estimate.

Source: Michigan Department of Treasury, State Tax Commission.

TABLE C-40
Michigan Real and Personal Property Values by Class, 1966-1981

Year	Agriculture	Commercial	Industrial	Residential	Timber-Cut Over	Total
			Real			
1966	1,865,411,212	3,285,671,581	3,512,792,357	12,855,036,112	121,503,073	21,640,414,335
1967	1,948,819,877	3,387,509,107	3,579,844,740	13,768,088,054	121,466,492	22,805,728,270
1968	2,034,092,841	3,592,710,960	3,810,973,211	14,969,692,928	131,887,565	24,539,357,505
1969	2,259,750,633	3,895,805,295	4,026,509,087	16,769,575,874	142,832,730	27,094,473,619
1970	2,430,122,929	4,482,891,393	4,357,805,773	18,425,815,010	152,210,761	29,848,845,866
1971	2,631,643,039	4 920,726,264	4,732,051,343	20,121,981,797	166,389,114	32,572,791,557
1972	2,767,998,546	5,289,180,485	5,006,268,860	21,837,363,296	198,391,053	35,099,202,040
1973	2,966,596,460	6,095,838,694	5,257,318,114	23,132,331,200	230,441,780	37,682,526,248
1974	3,253,519,145	6,748,511,652	5,614,001,496	25,185,954,680	259,918,052	41,061,905,025
1975	3,680,674,772	7,251,964,454	5,824,753,617	27,679,961,125	289,724,453	44,727,078,421
1976	3,931,334,132	7,643,557,366	6,356,640,800	29,652,286,598	339,314,392	47,923,133,288
1977	4,410,266,132	8,077,760,508	6,585,112,846	32,150,563,868	381,970,088	51,605,673,442
1978	5,050,142,536	8,650,737,622	6,935,567,107	35,256,657,107	422,603,165	56,315,708,253
1979	5,766,430,668	9,581,045,520	7,502,276,607	39,954,252,345	466,549,835	63,270,554,975
1980	6,328,135,948	10,633,386,181	8,181,599,425	46,669,303,911	687,806,033	72,500,231,498
1981	6,851,013,534	11,556,372,899	9,124,359,043	53,018,267,770	529,173,435	81,492,349,275[2]
			Personal			
Year	Agriculture	Commercial	Industrial	Residential	Utility	Total
1966	147,296,543	1,345,365,329	3,842,520,992	29,007,598	1,201,783,294	6,565,973,756
1967	1,018,373	1,490,963,980	4,262,523,175	27,726,088	1,299,049,485	7,081,281,101
1968	298,192	1,645,679,027	4,439,767,958	27,961,824	1,427,807,619	7,541,514,620
1969	134,764	1,786,309,802	4,670,662,761	37,587,110	1,612,062,552	8,106,756,989
1970	74,842	1,962,491,600	5,009,824,294	26,318,343	1,758,839,874	8,757,548,953
1971	94,686	2,060,693,881	5,128,931,506	27,807,650	1,847,296,876	9,064,824,599
1972	80,064	2,134,366,046	5,227,795,300	28,592,264	1,979,750,787	9,370,584,461
1973	128,156	2,328,516,373	5,417,026,545	32,384,384	2,143,642,638	9,921,698,096
1974	207,163	2,591,166,371	5,812,222,781	36,173,370	2,379,939,037	10,819,708,722
1975	204,494	2,844,516,638	6,551,055,713	39,285,910	2,652,494,463	12,087,557,218
1976	199,605	1,524,568,091	3,568,938,839	42,203,838	2,402,751,114	7,538,661,487
1977	261,790	1,621,573,625	3,702,836,647	44,002,603	2,528,988,905	7,897,663,570
1978	255,864	1,781,876,984	4,029,145,367	52,710,272	2,690,893,405	8,554,881,892
1979	279,328	1,971,939,226	4,304,285,432	54,087,484	2,926,809,276	9,257,400,746
1980	258,028	2,213,845,812	4,667,437,859	63,271,040	3,201,005,728	10,145,818,467
1981	490,114	2,458,616,916	4,753,688,798	61,383,795	3,292,605,897	10,566,785,520

[1]Figures through 1970 represent 50 percent of true cash value. Figures from 1971 on represent state equalized value.

[2]The total for real property includes $413,222,594 for developmental property.

Source: Michigan Department of Treasury, State Tax Commission.

TABLE C-41
Michigan General Property Taxes by Local Unit of Government, 1958-1980
(Dollar Amounts in Thousands)

Year	School		City		County		Township		Village		Total	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
1958	$ 353,802.2	47.7	$ 234,384.0	31.6	$ 135,025.9	18.2	$ 10,124.2	1.4	$ 7,960.0	1.1	$ 741,260.3	100.0
1959	389,000.3	49.5	242,136.3	30.8	137,105.3	17.4	11,002.3	1.4	7,405.2	0.9	786,649.4	100.0
1960	434,146.0	51.0	250,634.4	29.4	146,079.6	17.2	12,840.1	1.5	7,479.5	0.9	851,179.6	100.0
1961	451,447.4	51.6	253,717.6	29.0	148,592.5	17.0	13,910.8	1.6	7,107.0	0.8	874,775.3	100.0
1962	465,724.7	52.3	254,522.7	28.6	149,178.6	16.7	14,697.9	1.6	7,183.0	0.8	891,306.9	100.0
1963	498,052.4	53.3	260,411.0	27.8	153,274.8	16.4	15,773.4	1.7	7,357.4	0.8	934,869.0	100.0
1964	534,370.4	53.9	265,713.7	26.8	166,548.3	16.8	16,978.0	1.7	7,623.8	0.8	991,234.2	100.0
1965	571,091.1	55.0	269,558.3	26.0	172,293.6	16.6	19,024.5	1.8	6,655.5	0.6	1,038,623.0	100.0
1966	636,209.7	56.3	282,974.0	25.1	181,355.7	16.1	21,743.5	1.9	6,941.4	0.6	1,129,224.3	100.0
1967	750,348.5	58.2	314,664.2	24.4	189,037.4	14.7	26,793.6	2.1	7,838.3	0.6	1,288,682.0	100.0
1968	898,866.9	60.9	339,445.3	23.0	199,504.7	13.5	28,703.2	2.0	8,474.1	0.6	1,474,994.2	100.0
1969	1,032,700.1	62.2	368,264.1	22.2	216,840.8	13.1	33,868.7	2.0	9,187.6	0.5	1,660,861.3	100.0
1970	1,167,313.3	62.3	417,562.7	22.3	240,246.9	12.8	38,954.4	2.1	10,214.2	0.5	1,874,291.5	100.0
1971	1,293,298.2	62.7	455,499.5	22.1	259,503.5	12.6	43,820.7	2.1	11,158.2	0.5	2,063,280.1	100.0
1972	1,367,523.3	62.6	478,665.4	21.9	276,349.4	12.7	47,966.9	2.2	12,719.4	0.6	2,183,224.4	100.0
1973	1,543,161.8	63.8	515,281.2	21.3	294,461.2	12.1	53,656.6	2.2	13,841.8	0.6	2,420,402.6	100.0
1974	1,725,399.0	65.1	525,884.2	19.8	319,716.8	12.1	62,529.7	2.4	16,064.2	0.6	2,649,593.8	100.0
1975	1,899,787.4	65.4	564,565.6	19.4	347,099.5	12.0	74,693.5	2.6	17,759.6	0.6	2,903,905.6	100.0
1976	1,951,535.5	65.9	571,117.9	19.3	341.809.9	11.5	78,555.2	2.7	17,705.1	0.6	2,960,723.6	100.0
1977	2,141,067.6	66.8	586,803.2	18.3	369,748.3	11.5	90,448.4	2.8	19,028.3	0.6	3,207,095.8	100.0
1978	2,342,118.9	67.2	620,979.0	17.8	400,217.0	11.5	100,893.4	2.9	20,665.5	0.6	3,484,873.8	100.0
1979	2,622,639.0	67.4	677,378.3	17.4	447,480.4	11.5	118,691.2	3.1	23,189.3	0.6	3,889,378.1	100.0
1980	3,009,469.3	68.2	736,984.7	16.7	504,459.5	11.5	134,301.8	3.0	26,162.5	0.6	4,411,377.8	100.0

Source: Michigan Department of Treasury, State Tax Commission.

TABLE C-42
Michigan School Property Taxes, 1958-1980
(Dollar Amounts in Thousands)

Year	Operating			Debt and Building and Site			Total School Taxes		
	Amount	Percent of Total School Taxes	Millage Rate	Amount	Percent of Total School Taxes	Millage Rate	Amount	Percent of Total Property Taxes	Millage Rate
1958	$ 263,285.6	74.4	11.88	$ 90,516.6	25.6	4.09	$ 353,802.2	35.5	15.97
1959	283,735.4	72.9	12.65	105,264.9	27.1	4.69	389,000.3	36.1	17.34
1960	322.184.3	74.2	12.96	111,961.7	25.8	4.50	434,146.0	37.9	17.46
1961	342,556.0	75.9	13.59	108,891.4	24.1	4.32	451,447.4	39.2	17.91
1962	363,570.0	78.1	14.44	102,154.7	21.9	4.05	465,724.7	40.8	18.49
1963	398,223.4	80.0	15.44	99,829.0	20.0	3.87	498,052.4	42.6	19.31
1964	433,945.3	81.2	16.47	100,425.1	18.8	3.81	534,370.4	43.8	20.28
1965	466,697.7	81.7	17.23	104,393.4	18.3	3.86	571,091.1	44.9	21.09
1966	524,235.6	82.4	18.59	111,974.1	17.6	3.97	636,209.7	46.4	22.56
1967	629,330.8	83.9	21.05	121,017.7	16.1	4.05	750,348.5	48.8	25.10
1968	761,094.8	84.7	23.75	137,772.1	15.3	4.30	898,866.9	51.6	28.05
1969	868,152.4	84.1	24.73	164,547.7	15.9	4.69	1,032,700.1	52.2	29.42
1970	989,877.6	84.8	25.68	177,435.7	15.2	4.60	1,167,313.3	52.8	30.28
1971	1,101,358.7	85.2	26.44	191,939.5	14.8	4.61	1,293,298.2	53.3	31.05
1972	1,171,356.3	85.7	26.33	196,167.0	14.3	4.41	1,367,523.3	53.6	30.74
1973	1,317,419.4	85.4	27.67	225,742.4	14.6	4.74	1,543,161.8	54.4	32.41
1974	1,494,394.3	86.6	28.81	231,004.6	13.4	4.45	1,725,399.0	56.4	33.26
1975	1,663,951.6	87.6	29.30	235,835.8	12.4	4.15	1,899,787.4	57.3	33.45
1976	1,702,285.7	87.2	30.69	249,249.8	12.8	4.49	1,951,535.5	57.5	35.18
1977	1,891,472.6	88.3	31.78	249,595.0	11.7	4.20	2.141,067.6	66.8	35.98
1978	2,072,999.5	88.5	31.96	269,119.4	11.5	4.15	2,342,118.9	67.2	36.11
1979	2,339,301.7	89.2	32.25	283,337.3	10.8	3.90	2,622,639.0	67.4	36.15
1980	2,710,253.0	90.1	32.8	299,216.4	9.9	3.62	3,009,469.3	68.2	36.44

Source: Michigan Department of Treasury, State Tax Commission.